# 2025 Ashland Community Wildfire Protection Plan

# Signature Page

The following signatures indicate review and approval of the 2025 Ashland Community Wildfire Protection Plan with Appendices (2025 Ashland CWPP).

_Tonya Graham_                            10/13/25

**Tonya Graham – Mayor, City of Ashland**                 Date

_Marshall Rasor_                            Oct 8, 2025

**Marshall Rasor – Fire Chief, City of Ashland**            Date

_[signature]_                                 10/10/2025

**Dan Quinones – Southwest Oregon District Forester, Oregon Department of Forestry**           Date

# Acknowledgments

Approximately 100 individuals, representing various partner organizations, were involved in the City of Ashland Community Wildfire Protection Plan (CWPP) Management Advisory Committee (MAC) and/or various working groups that contributed to the overall outcome of the 2025 City of Ashland Community Wildfire Protection Plan. Many of these individuals served on multiple working groups, in addition to their other responsibilities within their respective organizations. The following list identifies these individuals by name and affiliation. City of Ashland personnel greatly value and appreciate the contributions of our cooperators in this endeavor to make the City of Ashland safer and more resilient to the threat of wildfire. If we inadvertently missed anyone, please know that we greatly appreciate your contributions to this effort.

| State Representatives | Affiliation |
|---|---|
| Jeff Golden | Oregon State Senator for District 3 |
| Pam Marsh | Oregon State Representative for District 5 |
| Ross Ballou | Oregon Dept. of Forestry - Southwest District Fire Planner |
| Silvia Ceron | Oregon Dept. of Human Services (ODHS) Office of Resilience and Emergency Management (OREM) |
| Taham "Kilo" Khosroabadi | Oregon Army National Guard |
| Teresa Vonn | Oregon State Fire Marshall - Regional Fire Risk Reduction Specialist |

| City Council/Mayor | Affiliation |
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| City Council/Mayor | Affiliation |
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| Doug Knauer | City Councilor |
| Dylan Bloom | City Councilor |
| Tonya Graham | City Mayor |

| City Staff | Affiliation |
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| Chad Woodward | Climate and Energy Coordinator |
| Chris Chambers | Fire & Rescue - Forestry Officer |
| Dorinda Cottle | Communications Officer |
| Emily Matlock | Fire & Rescue - Senior Administrative Analyst |
| Hannah King | Fire & Rescue - Wildfire Risk Reduction Specialist, Ashland Wildfire Mitigation Project |
| Kelly Burns | Emergency Management Coordinator |
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| Linda Reid | Housing Program Specialist |
| Mark Shay | Fire & Rescue - Fire Marshal, Deputy Fire Chief - Wildfire & Community Risk Reduction |
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| City Staff | Affiliation |
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| Tighe O'Meara | Police Chief |
| Tom McGowan | Fire & Rescue -Training Officer |
| Tom McBartlet | Electric Department |

| City Committee Reps | Affiliation |
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| Frank Betlejewski | Forest Lands Management Advisory Committee |
| John Williams | Forest Lands Management Advisory Committee |
| Kent Romney | Fire Adapted Ashland Management Advisory Committee |
| Priscila Franco | Forest Lands Management Advisory Committee |

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| City Committee Reps | Affiliation |
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| Rachel Glass | Forest Lands Management Advisory Committee |
| Reggie Windham | Fire Adapted Ashland Management Advisory Committee |

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| Greg White | Reinholdt Insurance, Current Chamber President |
| Eli Katkin | Owner, Brickroom Restaurant, Chamber Legislative Chair |
| Jordan Pease | Rogue Valley Metaphysical Library, Chamber Board Member |
| Mary Gardiner | Retired SOU, Past Chamber President |
| Meiwen Richards | Retired Bank Manager, Past Chamber President |
| Sandra Slattery | Ashland Chamber of Commerce, Executive Director |

| Businesses | Affiliation |
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| Catherine Hatfield | Rogue Valley Association of Realtors - Official Rep. (Windermere) |
| Chris Leishman | Gambrel Gallery |
| Chris Myron | Rogue Valley Association of REALTORS® |
| Cindy Bernard | Rogue Valley Roasting Company |
| Doug Volk | Mt. Ashland Association |

| Businesses | Affiliation |
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| Eli Katkin | Brickroom Restaurant |
| Eric Ahnmark | Recology Ashland |
| Eric Walker | Oregon Shakespeare Festival |
| Gary Blake | Recology Ashland |
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| Mark Gibson | Timberland Helicopters |
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| Universities | Affiliation |
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| Jennifer Sanborn | District Ranger, Siskiyou Mountains Ranger District * |
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| Federal | Affiliation<br>*Employees of the USDA Forest Service served solely in an advisory capacity. |
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| Kathy Rishel | Firewise USA® Resident Leader, Oak Knoll Meadows |
| Keila Miramontez | Mountain Meadows Retirement Community |

| Hospitals | Affiliation |
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| Scott Clemetson | Asante Rogue Regional, Emergency Manager |
| Stephanie Roland | Asante Community Health Foundation, Executive Director |

| Media Organization | Affiliation |
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| Non-Government Orgs | Affiliation |
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| Non-Government Orgs | Affiliation |
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| Tucker Teutsch III | Director, Firebrand Resiliency Collective |
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| Rachel Glass | Landscape Architect, Resident |
| Richard Whitley | Rotary, Resident |
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| Contractors | Affiliation |
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| Charisse Sydoriak | CWPP Subcontractor |
| Dena DeRose | CWPP Subcontractor – Intently Collaborative, LLC |
| Dustin Tetrault | CWPP Subcontractor – Target Hazard Consulting, LLC |
| Elijah Polsky | Aerial LiDAR Contractor – Rogue Reconnaissance LLC |
| Jerry McAdams | CWPP Contractor – MC Fire, LLC |
| Justice Jones | CWPP Subcontractor – Wildfire Justice, LLC |

2025 Ashland Community Wildfire Protection Plan

| Contractors | Affiliation |
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| Kevin Preister | Center for Social Ecology and Public Policy |
| Nate Casebeer | CWPP Subcontractor |
| Trevor Pereira | American Red Cross, Cascades Region |
| Trish Malone | Center for Social Ecology and Public Policy |

# Table of Contents

2025 Ashland Community Wildfire Protection Plan

# Executive Summary

# Executive Summary

The 2025 City of Ashland Community Wildfire Protection Plan (CWPP) reflects a citywide commitment to address the escalating threat of wildfire with inclusive planning, science-based strategies, and community-driven solutions. Guided by the Ashland City Council's 2022 "priorities, vision, and values" statements, this CWPP is a comprehensive wildfire risk reduction blueprint that ensures equitable access to services and resources.

Since adopting its first CWPP in 2004, Ashland has led with action — building nationally recognized programs like the Ashland Forest Resiliency (AFR) Stewardship Project. Through strategic local investment, the city has leveraged over $30 million in external funding to reduce wildfire risk in Ashland's municipal watershed and surrounding forests. Programs like Fire Adapted Ashland, Firewise USA®, SmokeWise Ashland, volunteer-run wildfire risk assessments, and school-based wildfire education initiatives have deepened community engagement across all sectors.

With climate-driven catastrophic urban wildfires, a growing insurability crisis, and stretched wildfire risk mitigation resources has brought Ashland to a pivotal moment. The risk facing Ashland is urgent and deeply personal. The 2009 Siskiyou Fire underscored the importance of proactive forest management, the 2010 Oak Knoll Fire destroyed 11 homes, and the 2020 Almeda Fire, ignited within Ashland's city limits, devastated neighboring communities and claimed three lives.

## What is a CWPP?

A CWPP is a community-driven roadmap for living more safely with wildfire. Under federal guidelines, every CWPP must:

- Be developed collaboratively with local, state, and federal partners, along with other community stakeholders.

- Identify and prioritize areas for hazardous fuel reduction — and recommend the best methods.

- Suggest practical actions that homeowners and neighborhoods can take to make homes and structures more resistant to fire.

The Healthy Forest Restoration Act (HFRA) defines these requirements — and gives funding priority to communities that have an up-to-date CWPP.

*Figure 1: CWPP*

Evacuations were required in every case. Wildfire is no longer a mere possibility; it is a growing and pressing reality.



*Figure 2: Ashland Skyline, Photo Courtesy of Jeremy Pawlowski*

> **Vision Statement:** *We envision a future where Ashland's fabric, economy, and spirit not only withstand wildfire—but grows stronger and more connected because of it. In this future, residents, students, workers, visitors, and pets remain safe during wildfires and return quickly to undamaged homes, schools, businesses, and gathering places.*

The creation of this update to Ashland's 2004 CWPP was supported by a USDA Community Wildfire Defense Grant. The updating process engaged over 4,600 Ashland community members through surveys, meetings, and working groups. This CWPP marks a community-wide commitment to protect Ashland. It calls everyone—residents, businesses, and leaders alike—to act, to lead, and to work

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together toward a future where wildfire resilience is not just possible, but enduring. That future begins with a **Vision.** To realize this **Vision**—before wildfire reshapes the city—Ashland must unite behind bold, achievable goals that turn intention into action. Embracing these goals will transform Ashland from a vulnerable fuel source into a community strong enough to slow fire, resist ignition, and protect everything we value. Five thematic goals form the pillars of Ashland's path to wildfire resilience—and the foundation for protecting our future.

| Thematic Goals |
|---|
| *Stronger Together, Safer Forever –* **Inspire and mobilize** the Ashland community through trust, shared leadership, and open dialogue to achieve 90% risk reduction within 10 years. |
| *Strengthen What Matters, Track What Counts –* **Harden Ashland's highly valued resources and assets (HVRAs)** to wildfire through data-informed strategic planning, regular risk assessments, and monitoring progress. |
| *Smart Standards, Big Results –* **Revise municipal codes** to align with the 90% risk reduction goal by integrating clear compliance timelines and financial assistance for eligible populations. |
| *Strengthen Our Core, Fund the Mission –* **Establish a reliable local funding mechanism** and build core capacity to partner, secure, manage, and match essential risk reduction resources. |
| *Meaningful Work, Massive Impact –* **Secure funding** to support wildfire risk assessments, implement inclusive community engagement initiatives, create and maintain resilient forests, and fund structure-hardening and defensible space work. |

*Figure 3: Thematic Goals*

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| Implementation Priorities |
|---|
| **Scaling up wildfire risk assessments** and structure-hardening programs citywide. |
| **Strengthening evacuation systems** and smoke resilience initiatives. |
| **Focusing outreach on socially vulnerable populations and renters,** ensuring equitable access to wildfire risk reduction resources. |
| **Building a full-time CWPP implementation team** and a robust tracking dashboard. |
| **Securing an average of $8 million annually** for 10 years to fund wildfire mitigation, workforce development, and public engagement. |
| **Revamping local codes and ordinances** to align with modern wildfire science. |

*Figure 4: Implementation Priorities*

Attaining the Vision, Goals, and Implementation Priorities takes more than technical solutions—it requires ongoing community involvement at every level. This plan lays out a clear path where each step—including motivating citizen action, strengthening homes, securing funding, and expanding capacity—moves Ashland closer to becoming stronger together and safer from wildfire.

## Navigating the Plan

To drive actionable outcomes, the plan uses the analogy of building a home: the five **Thematic Goals** form the foundation, each supported by **Key Results** that function like structural pillars—defining **major objectives** needed to create a strong, resilient community. Approximately 40 identified **Challenges** represent real-world barriers to public safety, infrastructure, environmental health, economic stability, and equity. These are addressed through targeted **Initiatives,** which serve as construction drawings within an implementation blueprint. Every step—from assessing community risk and assembling resources to adapting during setbacks—is guided by measurable outcomes, enabling regular public updates, annual evaluations, and continual adjustments. Together, these building blocks create a clear, flexible path forward.

Through the interactive Table of Contents (TOC) readers may easily navigate to each section.

Supporting information is provided in the listed appendices.

    A.   Community Profile
    B.   Table of Initiatives
    C.   Funding Mechanisms
    D.   Highly Valued Resources and Assets (HVRAs)
    E.   Whole Community Report
    F.   Socially Vulnerable Populations Project Report
    G.   Property Management Survey Report
    H.   Rental Owners Survey Report
    I.   CWPP DRAFT Comments and Responses

While this plan is relatively comprehensive—because the mission demands it—implementation is designed to be clear, logical, and actionable. It moves step-by-step from ambitious goals through focused objectives, connected challenge statements, and specific initiatives that drive real results. The 2025 CWPP is Ashland's blueprint for action. It builds on the community's legacy of environmental leadership and resilience, charting a necessary course toward a safer, stronger future—where every resident, business, and institution plays a vital role in meeting the wildfire challenge head-on.

Section 1

# Overview of the Planning Process

# Section 1: Overview of the Planning Process

*"A top priority is wildfire risk reduction that supports principles of equity and access."*

-Ashland City Council

## Introduction

In the summer of 2022, the Ashland City Council adopted Vision and Value Statements for the city which are embraced in this Community Wildfire Protection Plan (CWPP). In March 2023, the Mayor and City Council formally adopted priorities to take the city into the 2023-25 Biennium and beyond. A top priority is wildfire risk reduction that supports "principles of equity of access" to city services (Ashland City Council, 2022).

Ashland has a distinct environment and governance framework (see Appendices), which provides a foundation for understanding the community's wildfire challenges. There are many wildfire concerns expressed by residents which reflect strong feelings and ideas about how to reduce collective risk. It is evident that the community cares, as indicated by the level of community involvement in developing the 2025 City of Ashland CWPP.

## Wildfire Potential in Ashland

Situated in a fire-dependent dry forest ecoregion, Ashland has experienced over a century of fire exclusion, leading to dense secondary growth and an overabundance of woody vegetation in forested areas (Halofsky, 2016, 2020; Metlen et al., 2017). Historically, naturally occurring and indigenous-set fires in the Rogue Valley were the norm. Human suppression of these fires, starting in the mid-to-late 1800s, has resulted in diminished ecosystem function and structural resilience (Hessburg et al., 2019; Borgias in City of Ashland Forest Plan Appendix 8.3, 2004). Additionally, extensive logging has left unnaturally dense second-growth conifer forests (Metlen et al., 2017). Over

a century of land disturbance in the lower elevations, near the main core of Ashland, has transformed former savanna oak woodlands into annual-dominated, non-native grasslands.

A stark reminder of these vulnerabilities occurred on September 8, 2020, when the Almeda Fire ignited in one of Ashland's grassland areas adjacent to a riparian corridor. Wind-driven fire and embers rapidly spread northwest, devastating the communities of Talent and Phoenix, killing three people and destroying approximately 2,500 homes and 600 businesses (Rogue Valley Council of Governments, n.d.).

Rapid progression of the Almeda Fire highlights Ashland's critical need for comprehensive wildfire risk reduction and preparedness strategies.

## Ashland CWPP Development Process

In 2023, the City of Ashland received a USDA Community Wildfire Defense Grant (CWDG) for nearly $250,000 to update its twenty-year-old Community Wildfire Protection Plan (City of Ashland, 2004). These funds were contingent on using a multi-level, community-engaged process to guide issue identification and strategic planning. Ashland's application for the grant identified (10) ten specific plan components:

1. Assess **community structure ignitability** and fill risk assessment gaps.
2. Assess **critical infrastructure** vulnerable to wildfire impacts.
3. Develop a risk reduction **strategy for vulnerable community members.**
4. Enable **citywide structural ignitability risk reduction.**
5. Mitigate **landscape wildfire** potential.
6. Strengthen wildfire **prevention** strategies.
7. Promote personal **health and safety.**
8. Develop an **economic resilience** strategy.
9. Identify what is needed for a **post-fire recovery plan**.
10. Develop a **strategy to secure sustainable funding** to create a fire adapted community.

An expectation of the planning process was that it would be facilitated by a contractor and community advisory body jointly evaluating wildfire risk at multiple scales to meet the goals of the National Cohesive Wildland Fire Management Strategy (U.S. Department of the Interior, U.S. Department of Agriculture, and Wildland Fire Council, 2024), and a 45% in-kind match of city staff and volunteer time.

In addition to requiring community engagement in plan development, the city committed to integrating advances in understanding of social dynamics, public engagement strategies, wildfire risk assessment tools, identification of measurable outcomes, and a sustainable funding strategy.

In September 2023, the City of Ashland issued a call for proposals, to which five companies responded. MC Fire, LLC was selected, and an agreement was signed in January 2024.

In August 2023, the city invited more than 40 community members representing city, federal, and state government, residents, educational institutions, and businesses to a meeting to solicit interest in serving on the Ashland CWPP Management Advisory Committee (MAC).

While putting together the detailed process to incorporate a variety of community input and conduct a full update of the 2004 Ashland CWPP, it was evident that the update should include many facets that weren't originally emphasized in the 2004 document. To assist in these efforts, Ashland staff and a volunteer assembled the MAC and supported 10 working groups tasked with creating challenge statements and initiatives for their respective areas of concern. These groups and their roles are described in the following pages.

## Management Advisory Committee

Creating the CWPP has been a collaborative effort between community members and local organizations. A joint approach ensures that the 2025 City of Ashland CWPP embodies the diverse values, knowledge, and commitment of Ashland's citizens to wildfire risk reduction.

On August 23, 2023, approximately 40 community members gathered to learn about the City of Ashland receiving USDA Community Wildfire Defense Grant (CWDG) funds. This grant program allocated specific funding to assist the City of Ashland with updating an outdated plan from 2004. Meeting goals included encouraging participation in the MAC and identifying community values and

desired outcomes for the planning process. Participants expressed the following desired process conditions:

- Align the CWPP with the City of Ashland's 2023-25 Vision and Values Statement.

- Adopt a "whole systems" approach and strive for socially acceptable actions and outcomes.

- The plan should specify education and communication needs and include economic and social values that focus on businesses, industry, and schools.

- Use metrics to monitor and refine strategies over time.

- Collaborate with Oregon State University (OSU) and Southern Oregon University (SOU).

- Provide an easy-to-use information dashboard (e.g., "StoryMap").

- Ensure the CWPP is a living document with institutional support and funding for minor annual updates and major updates every five years.



*Figure 5: Management Advisory Committee Meeting, Photo Courtesy of Chris Chambers*

On February 26, 2024, community members and representatives of interested organizations attended the first CWPP MAC meeting where they received an overview of project work expectations (see Figure 5). A comprehensive project guide was provided which identified topics to be addressed in the CWPP and outlined goals and objectives in these areas. MAC members were encouraged to sign up for specific areas of interest identified in the project guide.

Working groups were developed to focus on the ten topics listed below:
- Community Wildfire Risk Assessment
- Public Health and Safety
- Economic Stability
- Insurance Crisis
- Renters Wildfire Risk
- Socially Vulnerable Populations
- Engaging the Unhoused Population
- Building Whole Community Mitigation Capacity
- Watershed and Forest Resilience
- Wildfire Recovery Planning

The MAC represented diverse perspectives, facilitated public input, and reviewed and recommended initiatives in this update to the Ashland CWPP.

## Working Groups

Most topic-specific CWPP inputs are individual working groups products. Each group's composition was determined by its leads, based on collective members expressed interest and subject matter expertise. Observers could attend meetings at the lead's discretion. Group sizes ranged from two to ten members. Meeting frequency was negotiated based on workload and each working group was tasked with developing an action plan.

Working group goals were outlined in a CWPP Project Guide, reflecting expectations outlined in the Community Wildfire Defense Grant (CWDG) application. Some goals were achievable within the planning process, while others were more visionary. It was the responsibility of each working group to identify relevant planning process goals and objectives, identify challenges and propose solutions,

define tasks and deliverables, and establish a timeline for deliverables. A short description of each working group's tasks and contributors follows.

## Community Wildfire Risk Assessment

This working group was tasked with: (1) establishing a baseline assessment of structure ignitability across all building types within the City of Ashland, (2) providing a comprehensive understanding of current vulnerabilities, (3) deepen insights into how wildland fuels and fire behavior interact with structural ignitability to better inform mitigation strategies, (4) evaluating critical infrastructure, specifically water, power, and communication systems, (5) identifying susceptibilities to wildfire, and (6) developing a living Wildfire Hazard and Risk Base Map for the City of Ashland.

City of Ashland staff, Oregon State University (OSU) professors and researchers, and an aerial imagery contractor comprised this multidisciplinary group.

## Public Health and Safety

This working group focused on public health and safety concerns, including: (1) the need for safe evacuations and public assembly areas, (2) emergency planning for Ashland's diverse school-aged community, (3) maintaining a resilient communication infrastructure, (4) creating an inclusive smoke response plan, (5) maintaining quality of life during a wildfire disaster event, (6) ensuring a secure water supply, and (7) protection of life.

The group met monthly for a year, with each member contributing to research, revising goals, and proposing further needs and wants. City of Ashland staff, community partners, and resident volunteers comprised this group.

## Economic Stability

This working group was tasked with: (1) determining how to prepare Ashland businesses, customers, and their employees for a wildfire emergency, (2) determining how to best help businesses prepare and adapt their facilities for wildfire smoke, and (3) propose a Wildfire Recovery Plan for the tourism industry, institutions, and key businesses.

Between January and December 2024 this group met ten times. City of Ashland staff, business owners and community partners comprised this standing committee of the Ashland Chamber of Commerce that pivoted in 2024 to develop the Economic Stability content of this plan and will continue to work on its future implementation.

## Insurance Crisis

In 2024, this working group met six times to discuss insurance issues, share information, and test ideas. The group was comprised of members of the Ashland Chamber of Commerce, elected Oregon State representatives, and city staff. Substantial effort was made by the CWPP development team to research the issues and summarize the current situation.

## Renters Wildfire Risk

This working group was formed on August 12, 2024 to: (1) identify strategies to motivate and enable renters to reduce their risk and potential impacts from wildfire to themselves and their rental structure, (2) identify strategies to motivate and enable rental property owners/managers to reduce their risk and potential adverse impacts to their properties from wildfire, and (3) facilitate the collection of survey data from property management companies and private rental property owners (see appendices).

The seven-member working group representing realty and property management companies, social service organizations, and residents met five times.

## Socially Vulnerable Populations (SVPs)

This working group was tasked with understanding the challenges faced by housed vulnerable populations—such as low-income individuals, those experiencing housing insecurity, and residents of mobile/manufactured home parks, people with disabilities, seniors, single-parent, and limited-English-speaking households—in creating and maintaining wildfire-resistant places of residence. Based on data collected in 2024 (see appendices), the group was asked to identify strategies to enable them to create and maintain fire-resistant homes.

## Engaging the Unhoused Population

Engaging the unhoused population was split into two parts: (1) preventing wildfires caused by the unhoused, and (2) enable the unhoused to find safety during a wildfire. Part 1 was assigned to City of Ashland Fire & Rescue staff, and Part 2 was assigned to the Public Health and Safety working group.

## Building Whole Community Mitigation Capacity

This working group was tasked with enhancing wildfire resilience throughout Ashland by identifying and scoring highly valued resources and assets (HVRAs) for priority risk reduction (see appendices). It was comprised of city staff and residents and formed to develop a bold strategy for reducing community wildfire risk through direct, tangible mitigation efforts. The group set a clear goal: achieve at least 90% compliance in wildfire mitigation across all properties within city limits within 10 years. To reach this goal, they designed a triage process to prioritize actions based on an inventory of HVRAs and identified strategies to build capacity for implementation.

## Watershed and Forest Resilience

This working group was tasked with: (1) collaborating with the Rogue River-Siskiyou National Forest and others to identify a pathway to develop a comprehensive, Ashland Watershed Management Plan, (2) updating fuel treatment parameters by incorporating the latest scientific research to predict climate change impacts on the city's forested lands, (3) mapping steps to promote climate-adapted landscapes by restoring structural and functional processes that align with projected climate scenarios, and (4) recommending actions to maximize snowpack accumulation and retention in the watershed to ensure the Ashland Municipal Watershed can consistently provide high-quality drinking water.

Additional considerations are activities to preplan stabilization efforts for the Ashland Watershed in the event of a severe wildfire and ensuring rapid recovery and sustained ecological health. The City of Ashland's Forestry Officer and members of the Ashland Forest Lands Commission comprise this working group.

## Wildfire Recovery Planning

The CWPP contractor and a subcontractor were tasked with: (1) summarizing socio-economic lessons from Oregon's 2020 wildfires, especially the Almeda Fire, (2) compiling recovery advice from communities affected by catastrophic wildfires, (3) incorporating initiatives from other working groups, and (4) determining the critical needs, budgeting, and timeline required to develop a collaborative Wildfire Recovery Plan for Ashland.

## Whole Community Engagement Summary

In addition to wide-ranging community involvement in the plan development process, the challenges and solutions identified were informed by a combination of qualitative and quantitative studies as shown in the table below.

### Engagement in Recent Ashland Wildfire-Related Studies

| Year | # Participants | Nature of the study |
|------|----------------|---------------------|
| 2015 | 437 | People engaging in wildfire-related conversations in a range of venues |
| 2019 | ~1,136 | Residents from single-family homes responding to a mail-in survey |
| 2020 | 2,472 | Mail-in survey to support an evacuation time study |
| 2024 | 225 | Socially vulnerable persons (primarily) were engaged in conversations |
| 2024 | 319 | Respondents to an open invitation to an online wildfire survey |
| 2024 | 8 | Respondents to property management company survey |
| 2024 | 22 | Respondents to a private rental property owner survey |
| **Total** | **~4,619** | |

*Table 1: Engagement in Recent Ashland Wildfire-Related Studies*

Successful implementation of the 2025 CWPP's recommended initiatives is dependent on significant community engagement, local collaboration, new investments, and bold strategies.

# Public Concerns About Wildfire

For a survey in October and November 2024, Ashland residents and businesses were openly invited to *"list any issue or concern they would like to see addressed in the Updated Ashland Community Wildfire Protection Plan"* and their *"ideas about how to resolve the issue"* in an online survey. 62% of the 319 respondents provided statements on what they thought should be covered in the CWPP and ideas for addressing the issues.

The statements were sorted into themes, with specific concerns, issues, and ideas sorted, scored, and analyzed. A **public interest rating (PIR)** was assigned, with ratings ranging from 15 to 100, with 100 representing the highest interest. These concerns and ratings are listed in the tables below:

## Public Health and Safety

| PIR | Issues / Concerns |
|---|---|
| 100 | traffic bottlenecks, evacuation routes, and alternative plans |
| 80 | narrow streets, overdevelopment, and lack of fire breaks |
| 35 | improved warning systems and multiple alert mechanisms |
| 30 | evacuation plans for schools and other institutions |

*Table 2: Public Health and Safety*

## Community Engagement

| PIR | Issues / Concerns |
|---|---|
| 90 | clearing vegetation, defensible space, and enforcing property maintenance |
| 75 | communication, outreach, and education about fire safety |
| 70 | challenges for disabled, elderly, low-income residents, and pet owners |
| 50 | rising insurance premiums and incentives for fire-safe measures |
| 45 | encouragement of neighborhood efforts and volunteer programs |
| 40 | recommendations for fire-resistant plants and banning flammable landscaping |
| 25 | suggestions for organized volunteer efforts to assist with mitigation tasks |
| 15 | plans to accommodate diverse needs, including mobility-impaired individuals |

*Table 3: Community Engagement*

## Wildfire Response and Prevention

| PIR | Issues / Concerns |
|---|---|
| 65 | risks from illegal camping and the need for supervised spaces |
| 60 | criticism of city management's use of funds and enforcement of safety codes |
| 40 | adequate water storage and availability during wildfires |
| 20 | stricter regulations and penalties for noncompliance with safety standards |

*Table 4: Wildfire Response and prevention*

# Summary of Challenges

The range of wildfire hazards and risks facing Ashland is broad and can feel overwhelming. To create a clear and manageable action plan, the issues were grouped into 44 **"challenge statements."** A list of more than 220 initiatives proposes solutions to these challenges.

The table below highlights key challenges Ashland must address to reduce wildfire risk across neighborhoods, businesses, natural areas, and infrastructure. These challenges were identified through community input, expert analysis, and a careful review of current conditions. Each challenge is directly linked to one or more initiatives proposed in this plan.

To facilitate navigation, challenges are organized by subject focus and assigned an identifier (identifying code for tracking purposes) that connects related initiatives throughout the CWPP.

## Table of Challenges

| Subject | ID | Challenges | Initiatives |
|---|---|---|---|
| Data Collection | CR-1 | To respond effectively, Ashland must routinely reassess wildfire hazards and risks across space and time. | 4 |
| Electrical System | CR-2 | Additional wildfire mitigation measures are needed to make Ashland's electrical system safer. | 5 |
| Water Quality & Supply | CR-3 | Action is needed to identify Ashland's water system limits and implement solutions to safeguard the city's clean water supply. | 2 |
| Prioritize Mitigation | CR-4 | Protecting every highly valued resource and asset in Ashland is impossible given limited time and resources, so triage is necessary. | 5 |
| Emergency Notices | HS-1 | Emergency notifications and advisories are not accessible to everyone, are confusing to some | 5 |

| | | members of the community, and the communication system has operational weaknesses. | |
|---|---|---|---|
| **Evacuation** | **HS-2** | Many are justifiably concerned that safe evacuation during an event will be extremely difficult for many reasons including not having the means to evacuate, confusion about what to do and where to go, blocked roads, and fallen utility poles. | **15** |
| **Smoke Impacts on Health** | **HS-3** | While the city has a 4-year-old community smoke impacts response plan, it has not been adequately funded and fully implemented. | **8** |
| **Safety During Fires** | **HS-4** | Local citizens and commuters are concerned about their health and safety during a wildfire event because they fear they will be unable to receive health care or survive if they can't evacuate. | **9** |
| **General Awareness** | **RR-1** | Residents' perceptions of wildfire risk vary significantly by housing type, location, ownership, and experience, leading to inadequate preparations. | **2** |
| **Physical Barriers** | **RR-2** | Physical/functional limitations prevent many residents from conducting wildfire risk reduction work. | **4** |
| **Financial Constraints** | **RR-3** | Financial constraints pose a significant barrier to wildfire risk reduction across all demographic groups. | **3** |
| **Neighbors** | **RR-4** | Collective residential risk reduction is essential to protect everyone, yet many neighbors do not participate, or their efforts are inadequate even when | **3** |

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|---|---|---|---|
| | | they are in a NFPA designated Firewise USA Neighborhood. | |
| **Workforce** | **RR-5** | Licensed and unlicensed workers are either not empowered to, are unaware of, or choose not to follow fire-resistant construction and/or landscaping best practices and some residents don't want to make recommended adjustments to be wildfire safe. | **6** |
| **Rental Management** | **RE-1** | Most renters lack authority to implement risk reduction measures. Rental owners and property management companies (by proxy) are ultimately responsible for reducing wildfire risk, but most are not taking necessary action. | **7** |
| **Tenant Awareness** | **RE-2** | Renters living in multi-unit housing face greater challenges. Many renters don't understand wildfire risk or are not motivated to learn. | **3** |
| **Affordable Rental Housing** | **RE-3** | In the aftermath of wildfire, the availability of affordable rental homes in Ashland may become severely limited, potentially forcing many residents to relocate. | **3** |
| **Vulnerable Households** | **SV-1** | Many socially vulnerable households underestimate their wildfire risk and face multiple barriers to reducing that risk. | **4** |
| **Engaging SVPs** | **SV-2** | SVPs require a variety of communication modalities to develop trusting relationships critical to fostering engagement. | **5** |
| **SVP Housing** | **SV-3** | A majority of socially vulnerable residents live in housing that is highly susceptible to wildfire ignition. | **3** |

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|---|---|---|---|
| **Homeowner Insurance** | **IN-1** | While most Ashland homeowners are insured, affordability and access to coverage are growing concerns, particularly for residents in high-risk areas like mobile home parks and homes near wildlands. | **5** |
| **Uninsured Renters** | **IN-2** | The number of uninsured renters in Ashland is significant, which means that many could lose all assets and be unable to find affordable temporary housing if their rental unit burns. | **4** |
| **SVP Loss Potential** | **IN-3** | Many socially vulnerable residents are uninsured, leaving them financially unprotected and at risk of displacement when a wildfire occurs. | **4** |
| **Business Insurance** | **IN-4** | Rising insurance costs and wildfire risks threaten business stability, housing security, and Ashland's socioeconomic viability, with rebuilding efforts expected to take years. | **3** |
| **Smoke Economics** | **ES-1** | Wildfire smoke is a recurring issue that continues to adversely impact Ashland's economy. | **6** |
| **Economic Security** | **ES-2** | A significant wildfire would devastate Ashland's economy, with long-lasting impacts that could cripple its economic stability for decades. | **13** |
| **Business Structures** | **ES-3** | Most businesses are not doing enough to protect their structures from exposure to wildfire. | **4** |
| **Leadership** | **PS-1** | Protecting the city from wildfire requires a fundamental shift in how community leaders and citizens collectively perceive and respond to the risk. | **7** |

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| Equitable Support | PS-2 | Existing wildfire mitigation efforts suffer from inconsistent and inadequate funding, making it extremely difficult to provide sufficient and equitable support to everyone. | 21 |
|---|---|---|---|
| Deliver Results | PS-3 | Voluntary compliance has proven insufficient, leaving the community dangerously exposed to wildfire. Alternative strategies are needed to accelerate risk reduction efforts. | 4 |
| Land Use Planning | CO-1 | Ashland Land Use Planning ordinances lack robust and current science-based requirements for new developments. | 3 |
| Municipal Code | CO-2 | Ashland Municipal Code lacks robust and current science-based requirements for new and existing structures. | 1 |
| Enforcement | CO-3 | City of Ashland staff are at or beyond capacity and don't have the time available to ensure compliance. | 2 |
| HOA CC&Rs | CO-4 | Many HOA CC&Rs in Ashland lack wildfire risk mitigation requirements, and some directly conflict with best practices and municipal codes. | 3 |
| Tree Mortality | LR-1 | Recent tree die-off in the lower Ashland Watershed is increasing fire danger to the community, watershed, and trails. | 6 |
| Mt. Ashland Recreation | LR-2 | Critical infrastructure and economic assets at the Mt. Ashland Ski Area are at significant risk of wildfire. | 9 |

| Climate Impacts | LR-3 | The Ashland Watershed's ecological integrity is increasingly threatened by climate change, yet no mitigation plan exists for federal lands, unlike the city's managed areas. | 2 |
|---|---|---|---|
| Unhoused Issues | RP-1 | Unhoused community members face heightened wildfire risks and are also at risk of accidentally starting fires. | 5 |
| Non-Forest Wildlands | RP-2 | Ashland's highest wildfire risk currently comes from ignitions and rapid fire spread in the non-forested lands surrounding and within the city. | 7 |
| Recovery Planning | RC-1 | Wildfire recovery can be slow, painful, unfair, and expensive, but proactive planning can significantly ease the process. | 1 |
| Recovery Capacity | RC-2 | Ashland lacks the capacity, personnel, and funding to effectively pre-plan for and deal with the devastation from a catastrophic wildfire. | 5 |
| Environmental Recovery | RC-3 | Wildfires can cause severe, lasting damage to streams and watersheds, triggering landslides and heavy sedimentation that can impact the city's potable water supply. | 1 |
| Protect High Value Assets | IM-1 | Capacity and funding don't exist to accomplish meaningful mitigation to protect all of Ashland's critical values in a short timeframe. | 6 |
| City Funding | IM-2: | Implementation requires city funding and resources as a baseline and to meet required matching dollars for external grants. | 1 |

| Operational Capacity | IM-3 | To be able to attract and administer significant funding we need dedicated city leadership, staff, and willing and able project partners. | 3 |
|---|---|---|---|

*Table 5: Table of Challenges*



*Figure 6: Drought Affects Emigrant Lake near Ashland, Photo Courtesy of Jesse*

# Section 2

## Looking Back and Leaping Forward

# Section 2: Looking Back and Leaping Forward

This section is a celebration of the progress that has been made in wildfire preparedness and risk reduction since the implementation of the 2004 CWPP, including achieving national recognition for these efforts. However, after 20 years, it is prudent to take a thoughtful and constructive approach to assess if the CWPP is meeting the challenges ahead. By evaluating wildfire risk reduction activities and leveraging the experiences and insights of the dedicated staff and volunteers, the city can assess its ability to sustain past initiatives while ensuring alignment with proven, science-based strategies that drive meaningful action. Through open and honest reflection, informed decisions can be made to maximize impact and ensure wise investment of resources for a safer, more resilient future.

## Looking Back

Ashland was one of the first communities to develop a Community Wildfire Protection Plan (CWPP) in response to the Healthy Forests Restoration Act of 2003 (HFRA) (U.S. Congress). Ashland's 2004 CWPP was informed by the best available science and exceeded HFRA requirements by "*1) proposing alternative locations and methods of treatments on federal land in our watershed, 2) prioritizing fuels reduction across the landscape, 3) addressing structural ignition, and 4) working with Oregon Department of Forestry, US Forest Service, and local fire officials.*" (City of Ashland, 2004; page 2). It laid out a vision for safeguarding the watershed and called for proactive treatments and initiatives designed to protect the forests, drinking water supply, wildlife habitat, and the safety of Ashland. This sparked a long-term commitment to achieving ecological health with community resilience.

### Ashland Forest Resiliency Project

The Ashland Forest Resiliency (AFR) project emerged from this work. Through thinning dense forests, controlled burning, community engagement, ecological monitoring, and collaborative stewardship, the AFR project restored forest health while reducing wildfire risk. What began as a necessary response to growing wildfire dangers evolved into a nationally recognized model of community driven forest management. It united city leadership, local organizations, federal agencies, and residents, in a shared mission to protect Ashland.

At the time, the 2004 CWPP addressed the most pressing and growing fire issue: increased size and severity of wildfires, primarily in forested settings. In 2002, the Biscuit Fire, at over 500,000 acres, had cloaked Ashland in smoke and significantly raised the bar for the size and impacts of wildfire in Oregon. That same summer, Ashland residents watched the East Antelope Fire torch the top of Grizzly Peak. New fuels mitigation efforts were turning into legitimate institutional programs when the 2004 CWPP was crafted.

A "log jam" of controversy over forest management was being broken down by the city's Restoration Phase II Project in 2004, using a helicopter to remove overly dense trees on more than 140 acres in the municipal watershed. These new efforts followed years of thinning small trees and brush to reduce fire danger and build community support for active forest stewardship.

Landowner grant assistance programs that began in 2001 because of the National Fire Plan (2000) had picked up steam and hundreds of acres of fuels reduction had been completed or were underway by 2004, leading to the city's first staff position dedicated to wildfire safety. This program connected landowners to professional expertise and funding; two major obstacles to reducing fire danger in Ashland's forested interface zone.

Community engagement was central to working with citizens, funders, researchers, students and public policy makers as phases of the project were implemented. Three longitudinal studies were completed by Southern Oregon University's Dr. Mark Shibley to understand public perceptions of the project. These studies found that residents reported having a spiritual, physical, and mental connection to the watershed and citizens wanted to know and understand the science, planning, and implementation processes. Tours, events, classes, field activities, a paid youth and education program, student service learning, and research from college students have kept people engaged and have helped to create a deeper understanding of forest health, the increased need for prescribed fire, and active forest management. A relatively new program, SmokeWise Ashland, was born from AFR to help increase the use of prescribed fire (and quickly increasingly polluted summer months) by educating residents, businesses, and visitors to protect themselves from smoke in the air.

The work continues, adapting to new challenges and embracing innovative approaches. By staying true to science, collaboration, and proactive care, Ashland's forests are enabled to adapt to rapid climate-driven changes. This helps protect the city's water supply and the community.

Though defensible space and home hardening were topics of conversation and study, there was much less emphasis on these topics in the 2004 CWPP. Some of the related education and outreach initiatives included:

- Information on Ashland's website, which has evolved, with the creation of a Fire Adapted Ashland website.
- Wildfire messaging in utility bills, which diminished over time as people chose to opt out of the city's newsletter.
- Evacuation drills in neighborhoods, which happened twice over a 19-year period.
- A single residential fire safety tour held in 2006.
- Lawn signs, which were used for properties that met Firewise USA® standards.
- A self-guided fire ecology interpretive trail, constructed in 2004 and updated in 2016.

Many other wildfire preparedness and risk reductions activities have been promoted by the City of Ashland since 2004, including the Ashland Fire Adapted Communities (FAC) Program, SmokeWise Ashland, and FireWorks!. The following information will provide brief descriptions of these activities, along with accomplishments and opportunities.

*Figure 7: Removal of Flammable Juniper by ODF Crew, Photo Courtesy of City of Ashland 2015*

## Free Home Wildfire Risk Assessments (2006-2024)

Between 2006-2024 hundreds of wildfire risk assessments were completed for single-family homes, where city staff and volunteers engaged face-to-face with residents. Annually, on average, approximately thirty-three (33) homes were assessed, with no quantitative measures to determine risk reduction performed by residents. Qualitative results included positive feedback from residents, increased demand for assessments, and noticeable risk reduction actions, which provided evidence to city staff that the program had tangible benefits to improving wildfire safety on individual private parcels. Unfortunately, in some years, few assessments were completed due to insufficient staff.

It became apparent that to affect significant risk reduction citywide, the average annual assessment rate needed to increase to meet the need for the nearly 7,000 single-family homes and thousands of multi-family residential units in Ashland. In 2021, this led to the formation of the volunteer Wildfire Risk Assessment Program (WRAP). Trained and certified volunteer assessors performed over 150 assessments within the first year of the WRAP program. Some years were more challenging due to delays resulting from the COVID pandemic shutdowns, as well as staff and volunteer shortages. This

program has since been restructured within Ashland's Community Emergency Response Team (CERT) program to secure funding and centralize fire department volunteer oversight.

## Fire Adapted Communities Coordinator (2015)

While the term fire adapted communities (FAC) was not specifically identified in the 2004 CWPP, efforts have been made to incorporate these concepts. A fire adapted community is a community that collaborates to identify its wildfire risk and works collectively on actionable steps to reduce its risk of loss. This work protects property and increases the safety of firefighters and residents. Creating fire adapted communities is also one of the three goals of the National Cohesive Wildland Fire Management Strategy (2014).

In 2015, Ashland was among the first cities in Oregon to hire a Fire Adapted Communities Coordinator to coordinate citizen wildfire safety and mitigation activities, engage with the community, and implement FAC concepts. The position grew out of a grant-funded Firewise Communities Coordinator position that was first created in 2010.

This work also includes developing codes and ordinances, facilitating fuels reduction, and planning evacuation strategies. A City of Ashland utilities fee provides funding for this position. Four (4) separate individuals have filled this role over the past ten (10) years.

## Tours and Lectures

Fire department staff schedule speaking engagements and field tours when requested, or as necessary. In the AFR project between 2010 and 2021, sixty-eight (68) tours were given in the Ashland Watershed, with an estimated 1,329 attendees. AFR partners also shared the significance of the project through hosting events like the Era of Megafires presentations by Paul Hessburg, three (3) of which were hosted between 2016 and 2018, guest lectures by fire historian Dr. Stephen J. Pyne and fire ecologist Dr. Susan Prichard. Maintaining positive perceptions of using prescribed fire and active forest management remains important.

City staff have given dozens of presentations to local service clubs, in Osher Lifelong Learning Institute (OLLI) courses, SOU and Ashland School District classes, homeowners associations, local and national conferences, and via online webinars.

Outreach activities can encourage residents to participate in reducing their own fuels using defensible space science and home hardening. Staff capacity should be maintained for providing community education activities. Tours of hardened homes and fire-resistant neighborhoods can be a way to directly influence the community to act. This is also an opportunity for managing risk perceptions and sharing the urgency of wildfire risk reduction. The City of Ashland can also sponsor community education events in partnership with organizations serving people at risk. However, there are currently no metrics to show that risk reduction actions are being taken by recipients because of city Staff or volunteer presentations.

## Educational Information on the City Website

Face-to-face interviews and online surveys in 2024 indicate that the city website is important to some users, while others such as socially vulnerable persons (SVPs) are less likely to use the website. Results also indicate that in-person, onsite risk assessments are the preferable methods of communication for respondents, as it enables interactive dialogue with residents.

## Firewise USA® Site Program

Ashland formally began supporting the National Fire Protection Association (NFPA) Firewise USA® (formerly Firewise Communities USA program) site program in 2010. This voluntary program encourages individual neighborhoods to acknowledge that they are at risk from wildfire and form a committee to encourage neighbors to protect their homes and surrounding areas from wildfire incrementally over time. In 2022, Ashland had thirty-three (33) certified Firewise USA® sites, which were the most Firewise USA® sites of any city in the country at that time. For tracking metrics, this program includes numbers of Firewise USA® sites, along with the per capita time and dollars spent per site.

Firewise USA® certificate of recognition standards do not require that any home attain a meaningful, code-based level of mitigation. Similarly, the program does not require any minimal level of mitigation across the community or neighborhood. Given Ashland's density, having a high level of homes attaining a meaningful level of mitigation is essential. The "certification" process can create a false sense of security—as residents may believe they are better protected though wildfire hazards remain high. The most effective neighborhoods have a strong leader, but the majority don't.

Expectations of city fire staff to assess, draft action plans, find funding, and routinely advise and oversee Firewise USA® communities is inadvisable and unsustainable. By focusing heavily on Firewise USA® sites, which primarily benefit financially secure homeowners in HOAs, the program limits city staff's capacity to support community residents with less resources.

The value of the program is getting neighbors to talk about shared risk and collectively reducing risk factors. If the neighborhood is "In Good Standing" it is often eligible for small fuel reduction grants. Select insurance companies offer small discounts in some states if a home is in a recognized Firewise USA® neighborhood that is in good standing.

However, using city staff to support Firewise USA® sites is not an effective use of city resources. The program has value, but these communities need to be self-directed and may need to hire certified risk assessors to maintain their Firewise USA® recognition. Fire staff or volunteers can continue to support the Firewise USA® program by speaking at neighborhood events and supporting individual home assessments. City staff time, formerly invested in Firewise USA® communities, has already been redirected towards other projects and programs, like the volunteer wildfire risk assessment program (WRAP).

## Citizen Wildfire Safety Commission

Ashland established a Firewise Commission in 2011 to "enhance the community's resilience to wildfire hazards." The Commission was renamed the Wildfire Safety Commission in 2019, with the purpose to "provide advice and support to the Council and City departments and education to the community on wildfire issues and plans for mitigation action … and to foster the efforts of the City of Ashland to adopt and achieve the goals set forth in the Fire Adapted Communities programs." (Ord. 3175 § 1, replaced, 03/05/2019). The Commission was switched to Management Advisory Committee status in September 2023 to free city staff from the time demands of public meeting rules. During its tenure, the Commission played a key role in expanding the Wildfire Hazard Zone, staffing the Farmer's Market AF&R Booth (still done by volunteers today), launching the annual Wildfire Preparedness Campaign, establishing the Wildfire Risk Assessment Program (WRAP), creating a real estate wildfire education program, and helping secure a $3 million FEMA grant to reduce wildfire risk for 1,100 of the city's most vulnerable single-family homes.

The Fire Adapted Ashland Management Advisory Committee's role is currently limited to supporting fire staff upon request. Ideally, this committee would meet on a more frequent basis.

## Farmer's Market (and other venues) Booth

An AF&R information booth has been seasonally staffed by volunteers at the Tuesday Farmer's Market since around 2016. This booth is also set up for special events upon request. Since the booth is typically run by volunteers it is relatively cost-effective, so long as there is availability to staff it, which is not always the case. A booth enables direct engagement when people have questions.

Overall effectiveness of this form of education and outreach has not been measured, although the number of interactions is now being tracked. It is a much-appreciated service, but it is unknown if these individuals act based on these interactions. When volunteers are not available, fire department personnel may end up staffing the booth.

## Annual Wildfire Preparedness Campaign

This annual campaign ran from 2018-2022. The campaign consisted primarily of setting up poster boards and placing monthly themed flyers in retail stores, at fire stations, and the YMCA from April through July. No metrics were used to measure if actions were taken based on people taking flyers. Research studies indicate that messaging through posters, brochures and handouts raises awareness but rarely motivates action.

## Ashland Wildfire Mitigation Project

The Ashland Wildfire Mitigation Project (AWMP) was initiated by AF&R and resulted in securing a Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation (PDM) grant in the amount of $3 million. The project's primary goal is to establish defensible space around approximately 1,100 of the highest risk single-family homes and eliminate wood-shake roofing, thereby reducing the overall risk to residents and structures from future wildfires. Assistance is specifically dedicated to single-family homes.

AWMP is the most successful mitigation program since the inception of Firewise in 2010. It requires residents to meet code-based standards for defensible space and eliminates one of the major risk factors for wildfire ignition in wood-shake roofing. Though the program doesn't fund other necessary

elements of home hardening, it accomplishes an important objective through a voluntary, incentive-based approach with verifiable results. As a pilot project of how community-wide risk reduction could work, it is understood that long-term, sustainable funding is needed to continue this sort of incentive-based work.

As of January 1, 2025, 167 eligible residents have reduced their wildfire risk by removing flammable vegetation and debris, and twelve (12) wood roof surfaces have been replaced.

A challenge has been hiring and keeping qualified staff in the Wildfire Mitigation Specialist coordinator role; a temporary grant-funded position dedicated to the AWMP. This program was on pause for several months due to lack of qualified applicants after the first coordinator left for a higher-paying, permanent job, which is a challenge in relying on grant funds.

This incentive-based program comes with an administrative burden given that FEMA and the Oregon Department of Emergency Management (OEM) are involved in oversight. While the results for properties participating in the program are excellent, the overall participation rate is low at 30% of those contacted from the list of highest risk homes. Defensible space work is only part of the equation in wildfire protection along with home hardening, so even homes who complete the AWMP still need more work to achieve a science-based and desired level of protection. However, AWMP does fill an important role as a means of learning more about how people can successfully reduce their risk through combining codes and incentives, and this needs to continue.

## SmokeWise Ashland Program

SmokeWise Ashland is a collaborative initiative in southwest Oregon dedicated to safeguarding public health and enhancing community resilience amid increasing wildfire smoke and increased need for controlled burns to mitigate wildfire risks. Established in 2016, the program unites various local entities, including AF&R, Ashland Chamber of Commerce, Asante Ashland Community Hospital (AACH), Jackson County Health and Human Services (JCHHS), the Oregon Shakespeare Festival (OSF), the Fire Adapted Ashland Management Advisory Committee, various schools and childcare centers, and Southern Oregon University (SOU).

SmokeWise Ashland offers community members comprehensive resources on topics such as understanding the Air Quality Index (AQI), improving indoor air quality, proper use of respirators,

wildfire prevention strategies, and methods to reduce exposure to wildfire smoke. It also provides information on controlled burns through text messages, social media and city news. Additionally, SmokeWise Ashland provides guidance for businesses, schools, and community groups on preparedness, decision-making, and communication during smoke events. Thirty-seven (37) PurpleAir monitors have been placed at various facilities around Ashland through this program.

In 2019, the City of Ashland received a $85,000 grant from the Oregon Department of Environmental Quality (ODEQ) to purchase and distribute 600 HEPA purifier units to the most smoke-vulnerable residents, demonstrating the program's proactive approach to public health. Since then, an additional 180 HEPA purifier units have been purchased. Free replacement filters for these units are also offered in the spring each year. In 2024, a total of 100 free filters were distributed in just a few days with the help of AF&R staff. In 2024, Oregon Health Authority (OHA) shipped 18,000 N95 respirators to the City of Ashland at no cost to the community. These are still being distributed, with about 9,000 respirators on hand for 2025.

In 2021, the City of Ashland purchased eight (8) high-capacity air scrubbers and installed these at Options for Helping Residents of Ashland (OHRA) transitional housing, Ashland Public Library, ScienceWorks, and Oregon Child Development Coalition (OCDC). Two (2) air scrubbers are in a storage facility for deployment at the City of Ashland Inclement Weather Shelter. Replacement filters for each unit are also in storage. Oregon Department of Human Service Office of Resilience and Emergency Management (ODHS-OREM) also has large capacity air scrubbers and air quality monitors for deployment during smoke events.

SmokeWise Ashland helped develop health messages in partnership with pulmonologists at AACH and the Ashland Chamber of Commerce. Community partners have been critical in dissemination of health information, development of community centered messages and in providing brochures, education videos and business products that help in smoke readiness.

For communications, SmokeWise Ashland began using text messages to inform the community of prescribed fire and other forest management activities that closed specific areas. SmokeWise and AF&R helped to establish best practices for notifying the community about smoke. SmokeWise also maintains a website that during the summer is the most visited by residents.

AF&R and SmokeWise also installed a watershed camera in 2018, which has frequent views. This provides a distant view of the watershed and helps in seeing air quality conditions and smoke movement during prescribed burns. Another role for this camera can be in early detection of wildfires.

In 2022, a survey of 280 Ashland residents during the development of the Jackson County Smoke Management Community Response Plan, found that **37% were extremely concerned** about smoke impacts on their health, **40% were very concerned**, 17% were concerned, 6% were slightly concerned, and 0% reported no concern for health impacts from smoke. The survey found that 40% of respondents wanted in-person classes, covering topics such as how to keep air clean, purchasing of HEPA purifier units, understanding the AQI, and how to select a respirator and wear one properly. In 2024, SmokeWise presented smoke and health information at nine (9) events to a total of 250 attendees.

SmokeWise also provided 100 HEPA units to families who spoke English as a second language and trained over 100 people who then built their own do-it-yourself (DIY) HEPA purifiers. Another forty (40) HEPA purifier units will be provided to community members in spring of 2025.

A critical challenge remains in funding the supplies needed for maintaining this clean air program, as well as sustainable funding for a permanent staff position to run this program; staffing for one position is currently funded by two (2) federal grants, which creates an uncertain future for the program.

# Wildfire Education for Students

One way the City of Ashland has supported the needs of K-12 grade students is with the development of a local fire science curriculum called FireWorks! Southern Oregon Fire Ecology Education (FireWorks! SOFEE). Since 2019, it has engaged with numerous organizations for development of local fire science curriculum. Partner organizations include Southern Oregon Forest Restoration Collaborative (SOFRC), Lomakatsi Restoration Project, ScienceWorks, Southern Oregon Educational Service District (SOESD), The Nature Conservancy (TNC), the Environmental Protection Agency (EPA), Bureau of Land Management (BLM), and the U.S. Forest Service (USFS). These partner organizations have been working together for student education since 2019. In 2024, it provided three (3) separate educator trainings, with an additional training in February 2025, and another planned training in November 2025.

AF&R has led development of the curriculum since hosting the first train-the-trainer workshop in March 2020. Twenty-eight (28) educators participated in the first training and have adopted the curriculum in their classrooms. Three (3) full-time educators were hired for the SOFRC to lead dissemination of both FireWorks! SOFEE for K-8th grade students, as well as a career and technical education program, Fire Bright, for high school students. The City of Ashland recently completed a grant with the BLM for $84,100 in January 2025 for the curriculum adoption and pilot of the FireWorks! SOFEE lessons at ScienceWorks and classrooms across the Rogue Valley.

Curriculum is ready to be posted to the USFS website, however, there has been a hold on posting any new content to the site. BLM funding also helped in the transfer of the curriculum and program planning to SOFRC for expanded reach.

Involving organizations in collaboratively developed projects like FireWorks! SOFEE has helped to bring in additional funding for smoke and wildfire education, broaden outreach, and provide a network of support for this train-the-trainer model, which can be expanded to other areas in Oregon. Increased collaboration among practitioners, educators and organizations serving at-risk populations helps develop social connections and relationships that will be relied upon when disaster strikes. Comprehensive and responsive fire education also helps with children's social and emotional well-being, as well as that of the educators serving them. Resources developed in this

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project, including an OSU Trauma-Informed Toolkit, have been shared with survivors in Lahaina and Pacific Palisades.

The reach of the program is being tracked on a map that SOFRC intends to publish in 2025. This map will allow educators to track student participation from all counties and share student-led service-learning projects. High school students who go into wildland fire, forestry, and related natural resource careers will be able to share their successes.

The City of Ashland also participates as part of an EPA collaborative for planning and dissemination of culturally relevant and engaging hands-on fire science called Southern Oregon Wildfire Resiliency and Emergency Preparedness (SOWREP). It is an effort to assist at-risk students by providing them opportunities to learn about wildfire, forest health and prescribed (Rx) fire. In 2020, 40% of the students in Phoenix-Talent School District lost their homes. This collaborative responded by organizing an art supply drive and distributed 600 art kits to students impacted by the Almeda and South Obenchain Fires.

Student education is a great way to reach a larger portion of the socially vulnerable population (SVP), who tend to be at greater risk of harm from smoke or wildfire disasters. It allows educators to have deeper discussions, which help students understand multiple issues like smoke and health needs, Ready, Set, Go!, evacuations routes, notifications, defensible space, home hardening, and forest stewardship.

To further connect student education and outreach efforts across the region, the City of Ashland and the Southern Oregon Forest Restoration Collaborative (SOFRC) are participating in the Rogue Valley Fire Prevention Cooperative (RVFPC). Older students assist with fuels reduction projects organized by a volunteer coordinator and actively participate in the community fuels reduction days. In 2024, Armadillo Institute and TRAILS Middle School worked at North Mountain Park and ScienceWorks to reduce fuels, and plans are being made for additional fuels work with student volunteers. Students have expressed an interest in more opportunities for service learning and want to help community members who do not have the physical capacity to reduce fuels around their homes. However, there is currently a lack of capacity to build upon this volunteer program.

*Figure 8:  Reducing Fuels at ScienceWorks Museum, Photo Courtesy of City of Ashland*

## Volunteer Wildfire Risk Assessment Program (WRAP)

Starting in 2009, AF&R staff began conducting face-to-face wildfire home risk assessments, with capacity expanding in 2021 when two (2) Wildfire Safety Commission volunteers worked with the Fire Adapted Communities Coordinator (FACC) to create the volunteer-run Wildfire Risk Assessment Program (WRAP). Volunteers designed the program, created the logo, and did most of the work, including designing an effectiveness survey. Five (5) residents were certified to perform assessments in October 2021. In the first year, more than 150 assessments were completed: a 470% increase over the annual average by AF&R staff.

WRAP sent emails to 200 residents who had an assessment completed between October 2021 and August 2022. Of the fifty-eight (58) respondents, all of them found the assessment useful, 83% indicated that they had performed some home hardening work, and 95% said they had done substantial work in the 0 – 5' zone around their home. Respondents also identified obstacles they had experienced in getting the work done. In the spring of 2023, the FACC and WRAP volunteers worked to expand the cohort of trained volunteers and refined the data collection platform. Three new WRAP volunteers were certified by fall 2023.



*Figure 9: WRAP Volunteers, Photo Courtesy of City of Ashland*

WRAP is best suited for volunteers who thrive in independent, field-based work rather than traditional desk roles or social group settings. WRAP work is also rewarding for those who enjoy making a tangible impact in their community, combining technical expertise with meaningful one-on-one interactions.

WRAP was paused for more than a year to transition to a new home assessment platform, Fire Aside, paid for with USFS Community Wildfire Defense Grant (CWDG) funds. Fire Aside is a subscription-based service, with no funding secured beyond 2025, which could limit Ashland's ability to use the

software in the future. This data collection platform enables the inclusion of photos to highlight specific issues and is designed to enable self-reporting of work accomplished. Marin County (California) reports that only about 20% of households used the self-reporting function, with the program proving most effective when tied to code enforcement.

There are alternative software platforms available that could be considered. For example, WUUII created the Madronus Wildfire Defense Network, which is utilized to assess properties for the popular IBHS Wildfire Prepared Home® program. It provides both self-service and full-service assessment options and facilitates remote or in-person consultations with wildfire risk specialists, streamlining property evaluations (Wuuii, 2024). In May 2025, the Firebrand Resiliency Collective elected to invest in the Wuuii software over the Fire Aside software in the areas they serve in the Rogue Valley. ODF, local municipalities (including Ashland), and private contractors have been creating their own versions of ArcGIS Survey 123 site-specific risk assessment data collection platforms for several years. We foresee the lack of a consistent data collection platform as a significant issue that must be addressed to create comparable regional risk metrics.

## Leaping Forward

Much has been done over the past 20+ years since the 2004 CWPP was written. However, the needle needs to move significantly on this pressing issue of community wildfire safety. Ashland's 2004 CWPP was drafted before a national effort was launched to understand how homeowners respond to wildfire risk, risk assessments, mitigation advice, codes and ordinances, wildfire events, and more. Since 2004, social science research has helped inform best practices for reducing wildfire risk in communities.

Other major changes since 2004 include an alarming rise of urban conflagrations (Insurance Institute for Business & Home Safety, 2023; Headwaters Economics, 2024; Syphard & Keeley, 2019; Kramer et al., 2019; Mann & Sherriff, 2019), a growing awareness of how disasters disproportionately impact socially vulnerable people (Fothergill & Peek, 2004; Thomas & Phillips, 2012; Islam & Winkel, 2017), and an increase in insights and tools for fostering more inclusive community engagement (Paveglio et al., 2018).

Science-based research on wildfire risk reduction has shown that the most effective strategy to invoke compliance is building trust-based relationships through direct, face-to-face engagement with residents (McCaffrey, 2020; USFS, 2018; Dickinson et al., 2015; McCaffrey, et al., 2011, 2013, 2015; Steelman & McCaffrey, 2012; Paveglio et al., 2009, 2018; Martin et al., 2009; Sturtevant & McCaffrey, 2006). This personal approach not only motivates individuals to take responsibility for their own property but also inspires neighbors to do the same, fostering a collective commitment to wildfire preparedness.

However, it is understood on an anecdotal level (e.g., carrot and stick) that motivating individuals to voluntary compliance only works for those individuals that will voluntarily comply. For others who don't wish to participate in wildfire preparedness and mitigation, codes and enforcement will be necessary.

## Coexisting with Wildfire

While the AFR project has reduced wildfire risk in the Ashland Watershed and adjacent forests through partnerships, funding, education, and measurable outcomes, there is simply no equivalency for the highly at-risk built environment or community, which has not had the same kind of focus, funding, and resources allocated to date. This CWPP is the next phase in the Ashland community's wildfire adaptation journey.

A primary vision in this 2025 CWPP update is to build on previous successes and lessons learned through the hard work of staff, volunteers, and citizens. Ashland has tried various approaches and has noted what has and hasn't worked. Ashland is now in a place to propose a new vision to meet a future of climate change and rapid adaptation, which will require different, and possibly drastic, means and methods of creating wildfire resistance and resilience. On September 8, 2020, the Almeda Fire was a near miss event for Ashland, and the need to protect the community was made abundantly clear. The fire rapidly spread to the adjacent communities of Talent and Phoenix, consuming ~2,800 homes, businesses, and public properties in these municipalities and surrounding rural areas.

*Figure 10: 2020 Almeda Fire Consuming a Manufactured Home Park in Talent or Phoenix, OR*

There are 20+ years of statistically significant, science-based research in fire-sciences and social-sciences to help inform and guide an effective approach for Ashland's future. The City of Ashland will need to take a big leap forward to increase capacity, with the threat of wildfire being listed by Ashland City Council as one of the highest risk events for the city. Capacity is the all-important "infrastructure" that supports and shapes organizations into sustainable, efficient, and effective change agents and enables individuals to do the work that needs to be done.

"Capacity building enables us to have the knowledge, skills, and resources to take action" (Coalitions & Collaboratives, n.d.). Unfortunately, AF&R's staff capacity is stretched thin, and personnel have more work than they could accomplish by themselves, which eventually leads to burnout.

Despite significant past investments in time and resources, residents and businesses are largely not motivated to act on the scale needed to ensure Ashland's survival in the face of severe wildfire. This 2025 City of Ashland CWPP provides a framework for "leaping forward" as a community.

# Community Risk Assessment

# Section 3: Community Risk Assessment

*"We have to live with wildland fire. We don't have to live with fire in our communities."*

(Calkin, et. al, 2023)

## Introduction

Urban areas, such as Ashland, are becoming increasingly vulnerable to large-scale wildfires (Giammanco, 2023). This growing risk is evident in recent catastrophic events, including the **2017 Tubbs Fire** and **2018 Camp Fire** in California, the **2020 Almeda Fire** that originated in Ashland, the **2022 Marshall Fire** in Colorado, the **2023 Lahaina Fire** in Maui, and the **2025 Palisades and Eaton Fires** in California (Insurance Institute for Business & Home Safety [IBHS], 2025). Over the past six (6) years, these urban conflagrations have resulted in the deaths of more than 220 people, countless animals, and the loss of tens of thousands of structures.

Ashland's highly valued resources and assets (HVRAs), including infrastructure, businesses, natural environments, and social institutions, play a critical role in supporting economic stability, public health, and overall wellbeing. When disasters occur, these resources and assets can be negatively impacted, disrupting essential services, displacing community, and impeding recovery efforts. For instance, damaged transportation networks can hinder emergency response and supply chain operations, while destruction of local businesses can lead to economic instability (Tierney, 2019). Similarly, the loss of natural resources, such as water supply, can have long-term environmental and economic consequences (Cutter et al., 2003). Furthermore, social institutions, such as schools and healthcare facilities, are vital for community resilience, and their impairment can exacerbate the challenges of recovery (Aldrich, 2012).

This section examines wildfire hazards and risks to Ashland's developed area resources and assets. It begins with an overview of projected climate change impacts, then examines past wildfires and current vulnerabilities in the built environment. The section concludes with a proposed scoring system to help prioritize treatments for HVRAs that are essential to Ashland's identity, functionality, and resilience.

## Climate Change Forecast

Climate change is impacting the Rogue Valley, affecting its ecosystems, economy, and communities. Since 1900, the region's average annual temperature has risen by about 2°F. Projections indicate it could increase by at least 5°F by 2074 and 7.6°F by 2100 under moderate emissions conditions (Fleishman, 2025).

As global temperatures rise, extremely hot days are becoming more common, and heat waves are increasing in frequency and intensity. In nearby Medford, the average number of days with temperatures reaching 90°F or higher rose from 53.5 days per year (1950–1960) to 67.4 days per year (2011–2020) (O'Neill et al., 2023).

Looking ahead, the number of dangerously hot days is expected to climb even more. The heat index combines air temperature and humidity to reflect how hot it feels and is a key measure because it's closely tied to human health risks. By 2040–2069, Medford could experience 30 to 40 more days per year with a heat index of 90°F or higher compared to the period from 1971–2000. By 2070–2099, that number is projected to increase to 39 to 62 additional hot days per year, depending on future emissions (O'Neill et al., 2023).

In the Klamath Mountains ecoregion, winter precipitation is expected to increase, while precipitation in other seasons is projected to decrease. Overall, annual precipitation is expected to rise by about 3%, with heavier winter storms becoming more intense (Pierce & Cayan, 2025). As these heavy storms become stronger, the risk of landslides will also increase, particularly in areas that have recently experienced wildfires.

Rising temperatures will cause a significant shift in how precipitation falls. By 2100, over 85% of the precipitation that once fell as snow in the Klamath Mountains is projected to fall as rain instead (Pierce & Cayan, 2025).

These changes, combined with warmer temperatures and shifts in precipitation patterns, are expected to make summer and autumn droughts more frequent, longer, and more severe (O'Neill et al., 2025).

# Ashland's Wildfire Risk and the Role of Climate and Wind Patterns

Ashland has a Mediterranean climate characterized by hot, dry summers and cool, wet winters; conditions that naturally increase the risk of wildfire ignition and spread (Abatzoglou & Williams, 2016). Recent changes in climate, including rising temperatures, prolonged droughts, and shifting precipitation patterns have further intensified this fire risk (Westerling, 2016; Halofsky et al., 2020).

In late summer and autumn, before the onset of fall rains, strong, dry easterly winds often fuel fast-moving wildfires. These winds have historically driven some of the largest wildfires in western Oregon, including the 2020 Almeda Fire (Abatzoglou et al., 2021; Mass et al., 2021; Reilly et al., 2022).

While climate change does not appear to be increasing the frequency or speed of easterly winds, conditions during these wind events are changing. Research shows that although easterly winds have slightly decreased since the preindustrial period, they are now more likely to occur alongside high temperatures, dry air, and parched vegetation, creating ideal conditions for large, rapidly spreading fires (Hawkins et al., 2022; Mass et al., 2022; Balch et al., 2024).

Downslope wind-driven fires, such as those fueled by Oregon's east winds, are especially dangerous. Between 1999 and 2020, these types of fires accounted for 60% of homes destroyed and 52% of wildfire-related deaths in the western U.S. (Abatzoglou et al., 2023).

Additionally, ecosystem changes, such as the spread of non-native grasses, the densification of forests, and the installation of tree plantations, have further heightened wildfire risk.

2025 Ashland Community Wildfire Protection Plan

In Ashland, this wind-driven wildfire threat is particularly concerning near the city's southeast edge, where a fire igniting in the Emigrant Lake area could spread quickly toward town, leaving little time for evacuation or emergency response. To address this, a team of researchers led by Boise State University (BSU) is studying evacuation strategies, traffic patterns, and fire response planning, with results expected in summer 2025.

## Local Wildland Hazards and Risk Management

Historically, most naturally occurring fires and indigenous burning that occurred in the Rogue Valley have been suppressed since the mid to late 1800s, resulting in diminished ecosystem function and structural resilience (Hessburg et al., 2019, Borgias in City of Ashland Appendix 8.3, 2004). Most of the region has been heavily logged, leaving unnaturally dense second growth conifer forests (Metlen et al., 2017). More than a century of livestock grazing in the lower elevations where Ashland lies has converted former savanna oak woodlands into annual-dominated and mostly non-native grasslands. The Almeda Fire started in one of these grasslands adjacent to a riparian corridor in Ashland.

Local initiatives such as the Ashland Forest Resiliency (AFR) Project have been developed to mitigate fire hazards in the Ashland Watershed through controlled burns, thinning, and community preparedness efforts (City of Ashland, 2022c). Research by Metlen et al. (2021) suggests that these fuel reduction treatments, including thinning and prescribed (Rx) fire, can significantly decrease wildfire severity while enhancing ecosystem resilience in southwestern Oregon's forests. These strategies aim to restore historical fire regimes and reduce the likelihood of catastrophic wildfires impacts. The AFR Project has been actively working to reduce fuel loads, but long-term sustainability requires ongoing investment in fire adaptation strategies. For more details, see the Landscape Resiliency Section 12.

## Significant Wildfires in and Adjacent to Ashland

The City of Ashland has experienced many wildfires since it was incorporated in 1874. The first reliable report of a major wildfire was the August 8, 1959, the Jackson Hot Springs Fire. The temperature was 105˚F at the time when two (2) arson fires broke out in dry grass near where the car dealerships are currently located on Highway 99. Driven by steady upslope winds, the fire traveled

through the Ashland Mine Road area and five (5) miles to the crest of the Ashland Watershed by nightfall.

| Fire Name | Date | Acres Burned | Structures Lost | Other |
|---|---|---|---|---|
| **Jackson Hot Springs** | Aug 8, 1959 | 2,800–3,800 | UNK | Arson |
| **Hillview** | Sept, 1973 | 330 | UNK | Arson |
| **Siskiyou** | Sept 21, 2009 | 188 | 1 | Electric Spark |
| **Oak Knoll** | Aug 24, 2010 | ~15 | 11 | Accidental |
| **Almeda** | Sept 8, 2020 | ~3,200 | ~2,800 | 3 died; ~6000 displaced |

*Table 6: Historic Wildfires in and Adjacent to Ashland*

Table 6 shows the five (5) largest wildfires within and adjacent to the city from 1959–2020. Fortunately, only one (1) of these fires, the 2010 Oak Knoll Fire, caused significant home losses in Ashland. However, the most destructive fire, the Almeda Fire in 2020, which started in Ashland, caused the loss of thousands of homes and hundreds of local businesses in the neighboring communities of Talent and Phoenix.

It is not a question of if, but when, another major wildfire will affect Ashland. How and where that fire (and subsequent fires) burns could profoundly shape the city's future. While we may be fortunate once again, there is also the risk of a worse-case scenario. Assessments show that Ashland and nearby communities face high wildfire risk, driven by natural conditions and human influences. The growing built environment, including homes, infrastructure, and cultural landmarks is increasingly vulnerable due to expansion into fire-prone areas and limited evacuation routes (Federal Emergency Management Agency [FEMA], 2023). Proactive planning and community-wide action are essential to reducing this risk and protecting Ashland's future.

# Ashland Developed Area Vulnerabilities

Ashland has a population of approximately 21,400 residents as of 2020. The city covers an area of 6.64 square miles (17.2 sq km), resulting in a population density of ~3,218 people per square mile (2.6 sq km); significantly higher than the national average of ninety-one (91) people per square mile (2.6 sq km) (U.S. Census Bureau, n.d.).

In 2018, through curbside risk assessments, Ashland collected parcel level wildfire risk data for 6,625 private single-family residential properties within city limits (assessors recorded what they could observe from the street). This data set serves as a qualitative baseline for land parcels containing single-family residential properties in 2018. The results of this assessment were used to apply for a $3,000,000 FEMA wildfire risk reduction grant to replace approximately twenty-four (24) wood roofs and to treat flammable vegetation on the top 1,100 most at risk single-family residential properties.

**To update the structural ignitability baseline for the entire city, the following was proposed:**

- Reassess the 6,625 residential properties to compare with 2018 baseline data.
- Establish baseline data for ~2,700 multifamily units on ~540 parcels.
- Establish baseline data for ~1,280 commercial, institutional, industrial, and governmental structures on ~680 parcels.

In addition, in the CWPP grant application, the city committed to "analyz[ing] risk by property type and develop[ing] customized risk reduction plans based on geographic patterns of wildfire risk."

In 2018, the City of Ashland declared the entire city as being at risk from wildfire and delineated Ashland as wildland-urban interface. This means that every property owner in the City of Ashland should strive to make their properties and structures resistant to the threat of wildfire. In March 2025, a geospatial exercise took place to determine ember transmission potential during windblown fires, and again Ashland shows to be at threat from wildfire transmitting into the built environment.
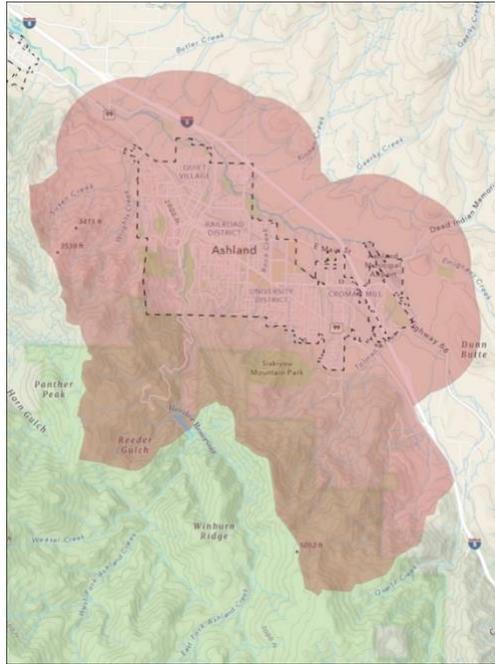
*Figure 11: Wildland-urban Interface in and Around Ashland (2025)*

## 2024 UAS LiDAR

In 2024, utilizing USFS Community Wildfire Defense Grant (CWDG) funds, UAS (unmanned aerial system) LiDAR (light detection and ranging) & RGB (red, green, blue) data was collected by a contracted aerial imaging provider. As part of this CWPP project, high-resolution LiDAR and RGB data were collected using UAS over approximately 4,300 acres of the City of Ashland, including portions of the Ashland Watershed. Flights were conducted in 100-acre sections at 250 feet above ground level (AGL) with 50% overlap, utilizing terrain awareness to navigate complex elevations. Data collection spanned approximately 2-1/2 weeks.

**Key deliverables produced from this effort include:**

- Digital Elevation Model (DEM) – High-resolution elevation data.
- Canopy Height Model (CHM) – Tree canopy structure representation.
- Classified Point Cloud – Ground, low, medium, and high vegetation classifications.

- Vegetation Polygon Layer – 1-foot resolution vegetation classification with height attributes for 2D/3D visualization.

- Ladder Fuels Polygon Layer – Identified ladder fuels (0-8ft AGL) to assess wildfire risk.

- Tree Canopy & Height Analysis – Using R programming, tree canopy polygons and tree height points were generated for all vegetation over two feet in height within city limits.

Data collection was conducted using a DJI M300 drone with a HESAI XT32 LiDAR sensor, Emlid RS2+ base station, and ODOT NTRIP network for RTK precision. Processing and analysis were performed using ESRI ArcGIS Pro, GlobalMapper Pro, and R programming (Forest Tools package).

## Modeling

Based in part on the UAS LiDAR data, Oregon State University (OSU) and Ashland staff worked with the UAS contractor to classify trees in Ashland into two classes: conifer and deciduous. To accomplish this, they used the tree canopy polygon created from the Tree Canopy and Height Analysis as the population of trees to classify.

Tree type analysis began with a population of 2,190 trees 'visually' classified as conifer or deciduous by city GIS staff. They averaged red, green, and blue visual bands from two aerial imagery datasets with a resolution < 1 m, as the basis for this classification, and used the infrared band from one of the image sources. A first aerial imagery set was **leaf off**, high-resolution aerial photography collected during the high-resolution LIDAR acquisition and included band 1 (red), band 2 (green) and band 3 (blue) that constitute color photography. A second aerial imagery set was collected through the NAIP program with **leaf on**, and consisted of band 1 (red), band 2 (green), band 3 (blue) and band 4 (near infrared). Individual bands from each dataset were averaged across the tree polygon and used in the statistical analysis.

A generalized linear model with a binomial distribution (logistic regression) was used to classify trees into conifer and deciduous classes. A stepwise model selection was used to determine which bands to include as factors contributing to distinction of conifer and deciduous trees. The team also tested for two-way interactions among variables within an aerial image dataset and ultimately settled on a model that included all bands from each dataset (leaf off and leaf on), as well as two-

way interaction among all three (3) bands in the leaf off imagery. The dataset was split into a training and assessment dataset so they could perform an accuracy assessment.

Model evaluation for logistic regression is best evaluated with the Area-Under-the-Curve value (AUC), where values above 0.7 are considered good, above 0.8 are considered great, and above 0.9 are considered **outstanding**. AUC for this model was 0.9847 (see Figure 12).
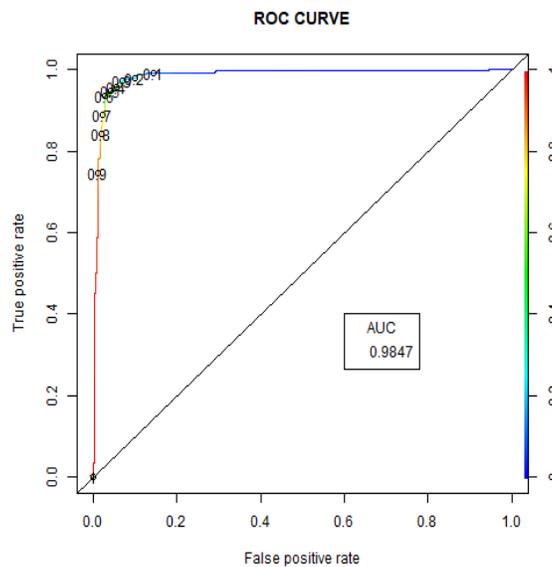


*Figure 12: AUC Values Related to Tree Classification Methodology*

The team conducted an accuracy assessment on the portion of data excluded from the model and found that by separating trees into conifer or deciduous models, based on a probability estimate for a conifer of 0.5, resulted in a model prediction accuracy of 95%. A confusion matrix on the accuracy assessment data was provided, where 1 = conifer. This model classifies trees very well and there does not appear to be a bias in prediction accuracy for conifers or deciduous trees.

This research is vital to quantify the incidence of conifers adjacent to structures, the data from which can be extrapolated to other vulnerabilities such as ladder fuels, interconnectedness of hazardous vegetation, etc.

## Other Data

Other attributes that inform the rapid spread of wildfire in the built environment are being drawn from the UAS LiDAR data, which includes vegetation within 5' of structures (Figure 13), as it is well understood in the fire sciences that this area should remain ember-resistant or fuel-free, to the extent that California has now instituted Zone 0 requirements "…which will require an ember-resistant zone within 5 feet of structures." (Office of Governor Gavin Newsom, 2025).



*Figure 13: Percentage of Vegetative Fuels Within 5' of A Structure*

Using the UAS LiDAR data, ladder fuel percentages were also quantified (Figure 14), which informs future steps to mitigate these known vulnerabilities. Ladder fuels are either live or dead vegetation that allows a surface fire to climb from ground level vertically up into the canopies of nearby trees, thus propagating the increased spread of fire.
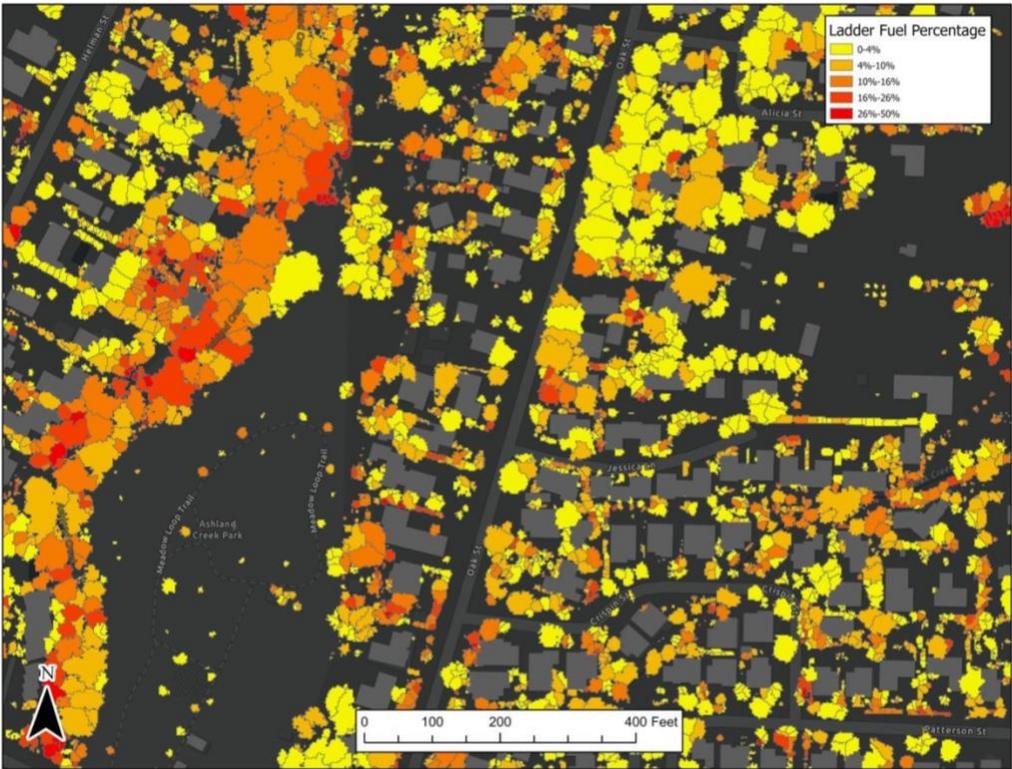
*Figure 14: Percentages of Ladder Fuels Around Structures*

Additionally, tree canopy cover over structures has been identified through this data (Figure 15), which will help inform parcel-based field assessments to determine the extent that limbs are within ten feet (10') of a particular structure's roofline. Ashland will also be able to identify through GIS data whether those specific trees are conifers or deciduous trees.
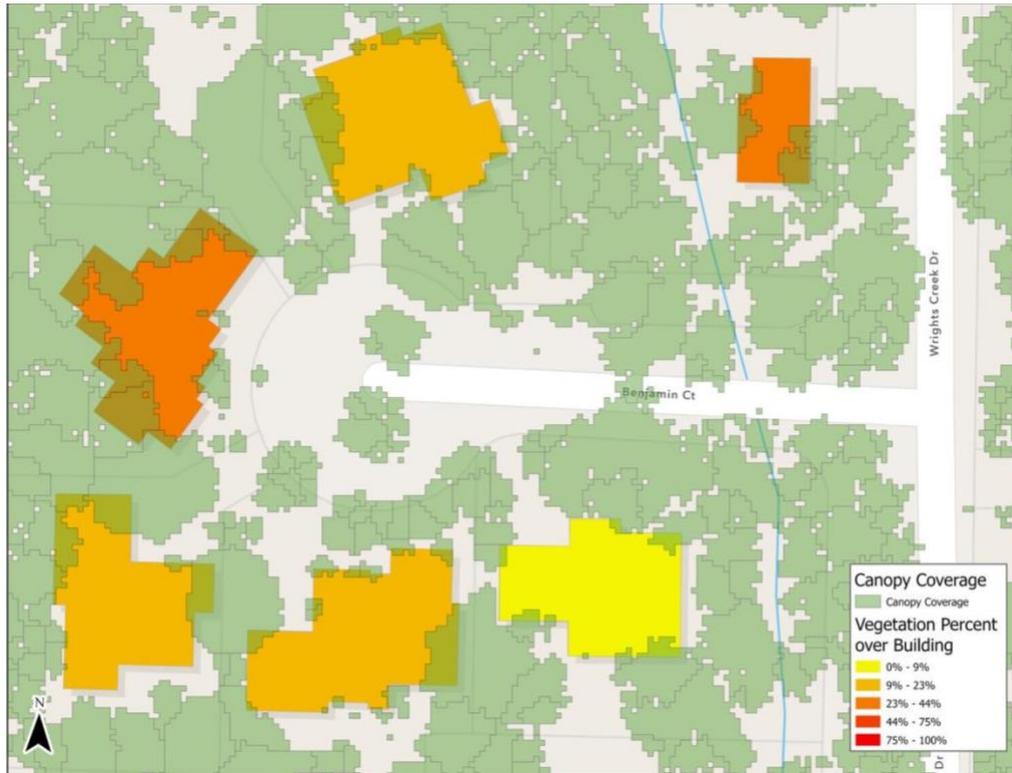
*Figure 15: Percentage of Tree Canopy Coverage Over Structures*

Lastly, and most importantly, the UAS LiDAR data has helped quantify structure density (e.g., setbacks from other structures) in Ashland's built environment (Figure 16). The horrific and common incidence of national tragedies, where a wind-driven wildfire transitions into the built environment and an urban conflagration ensues, drives the need to focus efforts on high-density developments. The National Institute of Standards and Technology (NIST) Hazard Mitigation Methodology (2022) specifically separates out HIGH, MODERATE, AND LOW density in the built environment, as it relates to interconnected fuels and the incidence of structure to structure spread in an urbanized setting (urban conflagration). This information should also inform future codes and zoning ordinances for new developments in Ashland.
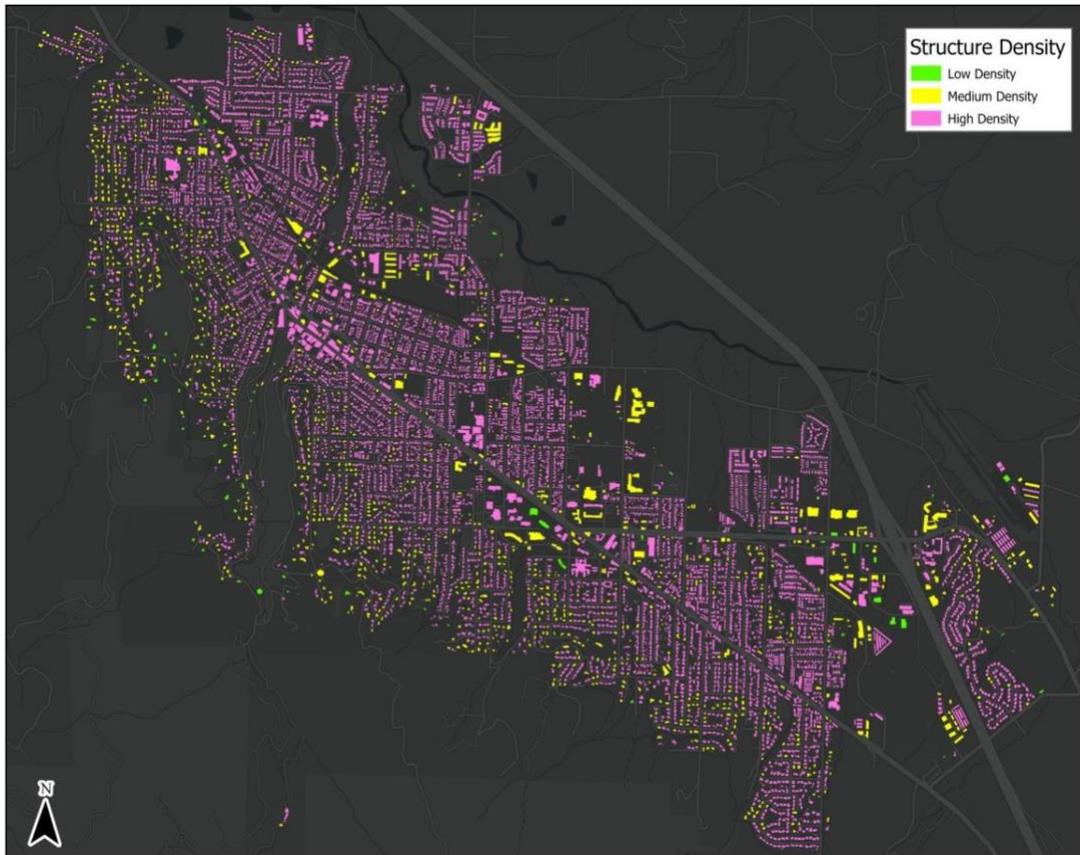
*Figure 16: Showing the Incidence of High-Density Construction in the City of Ashland*

## Next Steps

To complete Ashland's structural ignitability baseline, several critical steps remain. The City must reassess the 6,625 residential properties surveyed in 2018, establish baseline risk data for approximately 2,700 multifamily units, as well as 1,280 commercial, institutional, industrial, and governmental structures. Additionally, the City must analyze wildfire risk by property type and develop customized risk reduction plans based on geographic risk patterns. Utilizing the recently collected LiDAR and RGB data will be essential for advancing these efforts.

# Critical Infrastructure

## Electrical Infrastructure

Following the 2020 Labor Day fires, the Oregon Legislature passed Senate Bill 762 (Oregon State Legislature, 2021), which required utilities across the state to submit wildfire mitigation plans. The City of Ashland operates its own electric utility, though some infrastructure within the city is managed by Pacific Power and Bonneville Power Administration. In 2022, Ashland's electric utility submitted its wildfire mitigation plan, which was subsequently approved by the State of Oregon (City of Ashland, 2022b). The approved plan outlines local fire conditions, details Ashland's electrical system, and provides recommendations for improving fire safety. All recommendations within the Ashland Electric Utilities Wildfire Mitigation Plan (City of Ashland, 2022b) are considered initiatives under this CWPP. Moving forward, upgrades and mitigations outlined in the plan will be prioritized and implemented as funding becomes available.

The City of Ashland has taken significant steps to improve wildfire safety since the passage of Senate Bill 762. With its 2022 Electric Utilities Wildfire Mitigation Plan, the city has implemented key measures such as improved fuse technology, fire-resistant infrastructure, and enhanced vegetation management. Additional risk reduction work is needed.

## Water Supply Infrastructure

Recent urban wildfires, including the 2017 Tubbs Fire in Santa Rosa, the 2018 Camp Fire in Paradise, the 2020 Almeda Fire, the 2023 Marshall Fire in Colorado, and the 2025 Palisades and Eaton Fires in Los Angeles County, revealed a troubling pattern: water system failures during firefighting efforts. These systems were not designed to handle the extreme demands that today's increasingly common urban, large-scale fires place on them.

In Los Angeles, Janisse Quinones, Chief Executive of the Department of Water and Power, reported that their water system faced four (4) times the usual demand for fifteen (15) consecutive hours during the Palisades Fire (Hamilton, M., & Zahniser, D. (2025, January 8). Such strain can severely limit firefighting efforts. Worse still, system failures can cause water pressure to drop across entire sections of a city. As the fires grow and destroy homes, businesses, and infrastructure,

depressurization can draw contaminated smoke, ash, and toxic chemicals into the water supply, a dangerous mix that can persist for weeks or even months (Public Health Institute, 2022).

For example, following the 2017 Tubbs Fire in Santa Rosa's Fountaingrove neighborhood, extensive cleanup was required. Crews replaced more than 440 water lines, three (3) water mains, and eight (8) contaminated fire hydrants. The cleanup cost an estimated $8 million, and water restrictions remained in place for eleven (11) months. Overall damage to Santa Rosa's infrastructure was estimated at $111 million (Pineda, 2025).

Recognizing these risks, the City of Ashland is proactively working with RH2 Engineering, the firm that developed the City of Ashland Water Master Plan Update (City of Ashland, 2020b), and Dr. Erica Fischer from Oregon State University's College of Engineering. Dr. Fischer has studied water system failures following major wildfires and conducted experiments to understand how contamination occurs.

This team is building a detailed model of Ashland's water system (Figure 17). The model will simulate the extreme water flow demands expected during a wildfire, helping the city identify system vulnerabilities and develop strategies to prevent hydrants from running dry or drawing contaminants into the system. While the study's results will not be published until after this CWPP update is released, Ashland's Public Works and AF&R plan to use the findings to improve the city's fire readiness ahead of the next wildfire season.
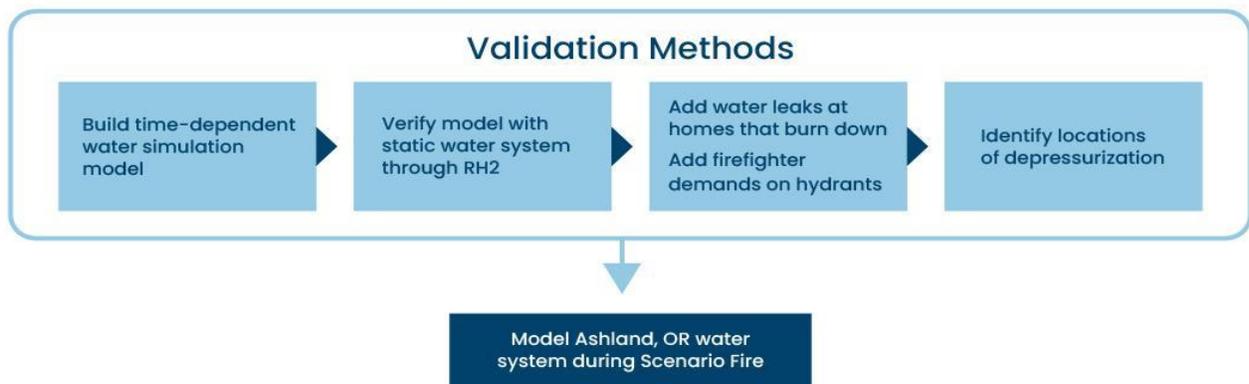


*Figure 17: Modeling Approach Outlined by RH2 Engineering and Oregon State University*

Ashland's water system is likely vulnerable to failure during a major wildfire, risking both firefighting capabilities and potential contamination. This will need to be addressed.

# Highly Valued Resources and Assets (HVRAs)

Highly valued resources and assets (HVRAs), as they pertain to wildfire, are those natural resources and human-created assets that can be impacted in a negative or positive way by wildfire. HVRAs enable the city to function, and to support its economy and welfare.

While every community resource and asset have value, not all carry the same weight. Some are the backbone of survival, irreplaceable lifelines that, once lost, could not be replaced with the same character, history, and not without significant time and cost. Others, though vital, have counterparts, making their absence less catastrophic (e.g., grocery stores).

A triage and rating exercise took place with stakeholders in 2024/2025 for Ashland's HVRAs. By assigning scores based on their physical vulnerabilities to wildfire and societal importance, it is possible to prioritize and collectively invest in protecting higher risk resources and values.

Wildfire will impact assets differently depending on their construction and location. It's usually very difficult and expensive to change the location of a fixed asset (e.g., the Ashland Water Treatment Plant), but if the asset is critical to the community, it may be a necessary investment to reduce exposure to the hazard. Often, the preferred recourse is making an asset more fire resistant by altering its condition.

For example, there are several major institutional assets in the city: Southern Oregon University, Oregon Shakespeare Festival, and Asante Ashland Community Hospital that contribute significantly to the cultural, educational, and social landscape of the region and to the welfare and quality of life in Ashland. Other examples include the infrastructure required for communications, transportation, and utilities that serve residents and businesses in Ashland, and the eight (8) schools that support roughly 2,600 students (Ashland School District, n.d.). The 175-acre Southern Oregon University campus is used by more than 6,200 students (Southern Oregon University, n.d.).

Ashland's small business assets include more than 100 restaurants, bars, coffee shops, galleries, music and theater venues, and specialty shops. Thousands of tourism jobs generate millions of

dollars that support approximately 350,000 visitors each year. Tourism is largely dependent on the 90-year-old Oregon Shakespeare Festival and a variety of local outdoor, visual arts, and culinary opportunities (Ashland Chamber of Commerce, 2023).

Other assets in Ashland include the many historic buildings and four (4) historic districts, which are on the National Register of Historic Places. There are also approximately 7,000 single-family residences, and hundreds of multi-family housing structures including an estimated 200 apartment buildings. Additionally mobile/manufactured home parks, within or directly adjacent to the city, contain around 400 rental spaces.

Decisions to allocate resources based on total weighted scores rest with policymakers. To calculate a total weighted score requires assessing each asset's fire-resistant qualities and wildfire exposure potential. Unfortunately, the city does not yet have this information, but advanced technological tools and refined data and modelling should make it possible to assess physical vulnerabilities in the next three to five (3 - 5) years or sooner. In the meanwhile, subjective community-based social valuing criteria may be used to set priorities.

## Scoring Process

To facilitate prioritization of limited wildfire risk reduction assets, a CWPP working group comprised of residents and city staff developed a process to score highly valued resources and assets (HVRAs) within and adjacent to the City of Ashland. The inspiration for the approach came from the 2024 Oregon Department of Land Conservation and Development Sea Level Rise Adaptation Planning Toolkit.

The first step in the process was to inventory assets. Ashland's list of HVRAs was informed by various FEMA documents and customized by the working group. Of note, functionally similar assets are grouped together to limit the appearance of bias in the scoring process. There are exceptions when an asset is of clearly greater value to many community members based on the threat of wildfire and the long post-fire recovery process.

The second step required the selection of scoring criteria and assigning a range of possible scores as shown in Table 7.

2025 Ashland Community Wildfire Protection Plan

| HVRA Scoring Categories | Scoring | Code |
|---|---|---|
| Exposure to environmental factors conducive to extreme fire behavior | 1-5 | EXPOSURE |
| Relative resistance to ignition by wildfire | 1-5 | RESISTANCE |
| Enables people and animals to survival/evacuate | 1-4 | SURVIVAL |
| Post-fire recovery value during the recovery process | 1-4 | RECOVERY |
| Importance to community function and identity | 1-10 | IMPORTANCE |
| Who would be most impacted if the asset were lost? | 1, 3, 5 | USERS |

*Table 7: Scoring Criteria and Range of Possible Scores*
*(The higher the number, the greater the weighted value score.)*

**Of the six categories, community (aka social) value is judged in four ways:**

1.  Whether the asset could help people survive or evacuate during the wildfire.
2.  The relative importance of the asset in facilitating recovery when the city experiences wildfire.
3.  The relative importance of the asset to the identity and functionality of the entire community regardless of fire impacts.
4.  Whether the asset is designed to or consistently serves more well-resourced populations, the entire community, or socially vulnerable populations (SVPs).

## The scoring rubric applied follows:

Assets in the same category guided prioritization between HVRAs. For instance, communications infrastructure, evacuation routes, and large irrigated fields are crucial for enabling evacuation and

survival during a wildfire, thus each received a top score of 4 in the SURVIVAL bin; while homes are generally not a suitable refuge during a wildfire, so they get a score of 1 in the SURVIVAL bin.

Assets vital for post-fire recovery include utility infrastructure (e.g., water and power, main roads), schools, and city records needed for rebuilding; each received a top score of 4 in RECOVERY. If there were multiple types of assets of the same type or they have counterparts available in Talent, Phoenix, or Medford, such as gas stations and restaurants, they received a wildfire recovery score of one.

Scoring the "relative importance" of HVRAs is challenging because property owners understandably view their own properties as highly significant. While losing some homes and businesses would be devastating for those directly affected, the city could continue to function and recover if enough critical HVRAs remained intact. For example, Ashland has eight (8) local gas stations, numerous restaurants, shops, cafes, and thousands of residential units, which place these HVRAs low to mid-range in the "importance" bin. However, essential services such as power, water, and sewer are vital to the city's overall functionality. Without them, the city could not operate, making critical infrastructure the highest priority, scoring a 10 on the "importance" scale.

Major economic drivers, like the Oregon Shakespeare Festival campus, rank higher than smaller theaters. Certain assets offer such essential and unique services that they are rated at the top of the scale (10), such as the hospital and Hosler Dam.

Relocating a fixed asset, such as the Ashland Water Treatment Plant, is extremely costly. However, if an asset is critical to the community, such investment of dollars may be justified to mitigate wildfire risk, and that decision was made by Ashland voters in fall 2024, in part because of wildfire risk.

It is not realistic to score all structures (over 10,000) in the built environment or to identify community assets that benefit one to a few citizens. We acknowledge that homes and businesses are important but cannot rank them against each other, so they are lumped together (see appendices).

To protect Ashland from wildfire devastation, critical assets must resist wildfire rather than act as fuel sources. By resisting ember attacks and disrupting fire spread, the built environment can slow the advancing wildfire and improve survival outcomes. Proactively reducing wildfire risk for key

community resources and assets is essential for resilience and recovery, which will require further refinement through geospatial prioritization of HVRAs.

# Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Community Risk Challenge Statements |
| --- |
| **Challenge CR-1:** To respond effectively, Ashland must routinely reassess wildfire hazards and risks. |
| **Challenge CR-2:** Additional wildfire mitigation measures are needed to make Ashland's electrical system safer. |
| **Challenge CR-3:** Action is needed to identify Ashland's water system limits and implement solutions to safeguard the city's clean water supply. |
| **Challenge CR-4:** Protecting all highly valued resources and assets in Ashland is impossible given limited time and resources. |

*Figure 18: Community Risk Challenge Statements*

## Baseline Conditions

- In 2018, 6,625 single-family residents were assessed through curbside observation. Approximately, 400 single-family residences have had full parcel wildfire risk assessment between 2019–2024.
- There is currently no baseline for accessory buildings, multi-family residential units, commercial, institutional, governmental or industry structures.

2025 Ashland Community Wildfire Protection Plan

- In 2022, an Ashland Electric Utilities Wildfire Mitigation Plan (EUWMP) was adopted; along these lines Ashland has a robust vegetation management crew and budget in place to prevent vegetation contact with overhead conductors and reduce fuel within these areas.

- Ashland's Water Master Plan was updated and approved the City Council in 2020, and the water treatment plant has since been approved for relocation to make it much less vulnerable to wildfire (City of Ashland, 2024).

- Research is underway to determine Ashland's water system requirements and adequacy to meet extreme demands from a major wildfire.

## Desired Conditions

- Achieve parcel-level wildfire hazard and risk data sufficient to drive timely, effective, and cost-saving risk mitigation across the community.

- Complete all initiatives in the Enhanced Urban Wildfire Mitigation Plan (EUWMP) within five (5) years to accelerate community resilience.

- Ensure clean, reliable water availability before, during, and after a worst-case wildfire scenario to protect public health and safety.

- Maintain water supply pressure and capacity at levels sufficient to meet peak wildfire suppression demands under extreme conditions.

- Treat 90% of Highly Valued Resources and Assets (HVRAs) within ten (10) years to reduce wildfire exposure potential and safeguard Ashland's critical resources.

## Tracking Metrics

- Data collection metrics can quantitatively detect wildfire prepared home and yard standards set by municipal code.

- Tracking metrics for electrical utilities are identified in the EUWMP.

- Metrics for water resource tracking are awaiting the results of the Oregon State University research study.

- Metrics will be used such as number and type of HVRAs that score 12 or higher on the **social index score** that are mitigated for wildfire hazards within 300 feet of the asset.

## Monitoring Plan

- Every city parcel is assessed for wildfire risk at least once every five (5) years.

- Water resource monitoring will be based on relevant research being conducted by Oregon State University.

- Track progress annually on an HVRA conditions base map (development in progress).

- Progress will be reported on a CWPP dashboard (to be created)

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Community Risk Initiatives | |
|---|---|
| **Challenge CR-1:** To respond effectively, Ashland must routinely reassess wildfire hazards and risks. | |
| CR-1.1 | Reassess the 6,625 residential properties to compare with 2018 baseline data. |
| CR-1.2 | Establish baseline data for ~2,700 multifamily units on ~540 parcels. |
| CR-1.3 | Establish baseline data for ~1,280 commercial, institutional, industrial, and governmental structures on ~680 parcels. |
| CR-1.4 | Analyze wildfire risk by property type so that customized risk reduction plans can be developed to address geographic patterns of wildfire risk. |
| **Challenge CR-2:** Additional wildfire mitigation measures are needed to make Ashland's electrical system safer. | |
| CR-2.1 | Replace expulsion fuses with current-limiting fuses in high-risk areas. |
| CR-2.2 | Replace wood cross-arms with fire-resistant fiberglass arms. |
| CR-2.3 | Install squirrel guards on poles to prevent animal-triggered ignitions. |
| CR-2.4 | Deploy drone inspections for pole and line monitoring. |

| CR-2.5 | Install cameras to monitor smoke and fire conditions. |
|---|---|
| **Challenge CR-3:** Action is needed to identify Ashland's water system limits and implement solutions to safeguard the city's clean water supply. | |
| CR-3.1 | Relocate the Water Treatment Plant to a safer site. |
| CR-3.2 | Develop water quality and supply assurance initiatives based on Oregon State University (OSU) water infrastructure vulnerability study. |
| **Challenge CR-4:** Protecting every highly valued resource and asset in Ashland is impossible given limited time and resources. | |
| CR-4.1 | Model wildfire scenarios and identify mitigation strategies. |
| CR-4.2 | Use LiDAR and AI to assess wildfire exposure for HRAs with a Social Index Score ≥12. |
| CR-4.3 | Perform ignition risk assessments on high social index scoring HVRAs. |
| CR-4.4 | Identify high-priority zones for early wildfire risk action investments. |
| CR-4.5 | Secure funding and community support for high-priority zone treatments. |

*Table 8: Community Risk Initiatives*

Section 4

# Community Health and Safety

# Section 4: Community Health and Safety

*"I am very concerned about hitting a traffic jam. I have 4 young kids.
We would probably jump in the ponds."*

-Ashland Resident Interviewed in 2024

## Introduction

This section explores the impact of wildfire on community health and safety and assesses Ashland's readiness to face this persistent threat. Then solutions are presented—developed through collaboration between city staff and community members—to strengthen Ashland's ability to keep people safe and healthy during wildfire and smoke episodes.

Major wildfires like the 2017 Tubbs Fire, 2018 Camp Fire, and 2020 Oregon fires forced mass evacuations, exposed hundreds of thousands to hazardous air, and caused lasting physical and mental health impacts (Environmental Protection Agency [EPA], 2022). While this section was being drafted, winter wildfires in the Los Angeles region exposed millions to extremely poor air quality, twenty-nine (29) lives were lost, and thousands of individuals and families face permanent displacement and long-term health impacts.

Wildfire poses immediate dangers, including loss of life, injuries, and the destruction of critical infrastructure, which can leave communities without essential services such as power, water, and healthcare. However, **the health impacts of wildfires extend well beyond the flames**. Wildfire smoke contains fine particulate matter (PM2.5) and toxic chemicals that can worsen respiratory and cardiovascular conditions, particularly for vulnerable populations such as children, the elderly, and individuals with preexisting health conditions (Liu et al., 2017). Studies have linked wildfire smoke exposure to increased hospital visits, respiratory complications, and long-term health risks, such as reduced lung function and heightened cardiovascular issues (Reid et al., 2016).

In addition to physical health effects, wildfires take a significant toll on mental well-being. Evacuations, loss of homes and livelihoods, and the uncertainty of rebuilding contribute to heightened levels of stress, anxiety, and depression among affected individuals (Friedman et al., 2021). First responders and healthcare workers also face psychological challenges, often experiencing burnout and post-traumatic stress due to the prolonged and demanding nature of wildfire response efforts (Doherty & Clayton, 2011).

Beyond health concerns, wildfires disrupt local economies, place immense pressure on emergency response systems, and create significant challenges for public health infrastructure (National Institute of Environmental Health Sciences [NIEHS], 2023).

These disruptions highlight the urgent need for comprehensive preparedness and resilience strategies to keep Ashland healthy and safe during local and regional wildfires.

## Process

A CWPP Working Group reviewed concerns and gaps in public awareness of wildfire-caused health and safety risks. Their assessment was based on research studies and input from the August 2023 pre-CWPP Management Advisory Committee (MAC) meeting.

Early in the planning process, several critical needs emerged, including establishing safe evacuation routes and public assembly areas, developing emergency plans for Ashland's diverse school-aged population, strengthening communication infrastructure, and augmenting Ashland's smoke response plan. Throughout discussions, a core value remained clear: preserving the community's quality of life during and after a wildfire disaster. Above all, the protection of life, particularly through securing a reliable water supply, was identified as the highest priority.

This chapter includes a summary of how Ashland residents perceive their evacuation preparedness and how they intend to evacuate. This information is based on surveys conducted in 2019 and 2024, along with a qualitative study in 2024 focusing on socially vulnerable residents. The findings establish a baseline to track progress as the 2025 Ashland CWPP is implemented.

# Evacuating During Wildfire

*"Evacuation is a huge concern. In our neighborhood there are streets that barely have room for two cars to pass each other due to cars parked on both sides of the street. This would be a huge bottleneck on trying to get through evacuation routes."*

-2024 Ashland Resident

The top wildfire concern for Ashland citizens based on a 2024 survey—earning a Public Interest Rating (PIR) of 100 on a scale of 15-100—are traffic bottlenecks, blocked evacuation routes, and lack of alternatives to evacuating. The third highest PIR (80) is a concern about narrow streets and overdevelopment impeding evacuation. Additionally, meetings with residents and multiple survey results revealed ongoing confusion about evacuation procedures and how to interpret emergency messages.

While the City of Ashland has taken important steps to prepare people to safely evacuate, a lot more needs to be done. Efforts are needed to help prepare larger institutions, such as the community hospital, assisted-living facilities, and schools.

In 2020, KLD Engineering was contracted to analyze the city's evacuation capabilities, summarize the findings, and make recommendations to reduce evacuation time. To prepare the report, citizens were invited to respond to a survey, of which nearly 2,500 residents responded. This study highlighted potential delays due to limited exit routes and congestion, emphasizing that even in ideal conditions, full evacuation of the entire city could take four (4) hours. Suggestions included reducing the number of cars per household during evacuation, creating safe refuge zones, and implementing minor infrastructure improvements to expedite traffic flow (KLD Engineering, P.C., 2021). Also included in the report were recommendations from city staff to implement parking restrictions on certain streets on Red Flag weather days and to manage vegetation along evacuation routes.

A 2019 mail-in survey of single-family home residents living in Ashland's "high-risk" areas—those adjacent to significant wildland fuels, steep slopes, or both—revealed that most respondents (average age of 67) have taken steps to prepare for evacuation. This survey found that 59% of respondents had an evacuation plan for their household, and among those with pets, 56% had a plan in place for their animals. However, there is room for improved evacuation preparedness, especially for livestock and broader participation in emergency alert systems (USDA Forest Service 2020).

Most respondents live in areas far from main thoroughfares, with steep, narrow roads that limit access (ingress and egress). While 35% of survey participants reported having only one road for ingress and egress, City of Ashland Fire & Rescue (AF&R) staff determined that this was true for only 22% of these properties. This discrepancy highlights an opportunity to better inform residents about their access options.

Driveway length and width were also assessed, as they play a crucial role in allowing first responders to reach properties safely and ensuring a smooth evacuation for occupants. These findings are particularly important for developing targeted educational materials for residents with long, narrow, steep, or complex driveways.

319 respondents to the 2024 online general CWPP survey answered a multiple-choice questionnaire to assess how prepared they are for a wildfire-related evacuation. As shown in Figure 19 nearly 86% of those who responded to the survey are registered for Citizen Alert, ~73% said they know the "Ready, Set, Go!" protocol, ~68% indicated that know their evacuation zone, and ~48% say they have a "Go-kit" ready. However, nearly 21% chose "I feel unprepared for an evacuation" and nearly 81% indicated that they may not have an evacuation plan, or that they may have a plan but have not practiced it.

## How Prepared Are You To Evacuate?
### Community Online Survey

| Category | Value |
|---|---|
| I'm registered on Citizen Alert/Everbridge (formerly Nixle) to get alerts | 273 (85.6%) |
| I know the Get Ready, Be Set, Go! protocol | 234 (73.4%) |
| I know my assigned evacuation zone number | 218 (68.3%) |
| I have a go-kit ready, including for my pets | 152 (47.6%) |
| I feel unprepared for an evacuation | 66 (20.7%) |
| I have an evacuation plan and have practiced it | 62 (19.4%) |
| Other | 27 (8.5%) |

n=319

*Figure 19: Community Evacuation Preparedness Survey Results (2024)*

Out of all respondents to the survey, 27% expounded on their evacuation preparedness concerns by selecting the "Other" choice and adding context; the input is highlighted in the following summary.

- A significant portion of respondents express varied levels of emergency preparedness, with some having detailed plans involving sheltering in place or specific evacuation routes, while others acknowledge gaps such as unpracticed plans, lack of go-kits, or uncertainty about evacuation zones.

- Personal experiences from past fires, including the Almeda Fire, contribute to heightened anxiety and a sense of urgency, particularly among those who previously lost homes or experienced chaotic evacuations.

- Concerns about community and infrastructure are prevalent, focusing on issues such as inadequate evacuation planning by local authorities, traffic congestion, and unclear or inaccessible evacuation routes.

- Some respondents admit to a lack of readiness, citing complacency or insufficient action despite recognizing potential risks.

Overall, the responses reflect a mix of proactive measures, learned experiences, and systemic challenges.
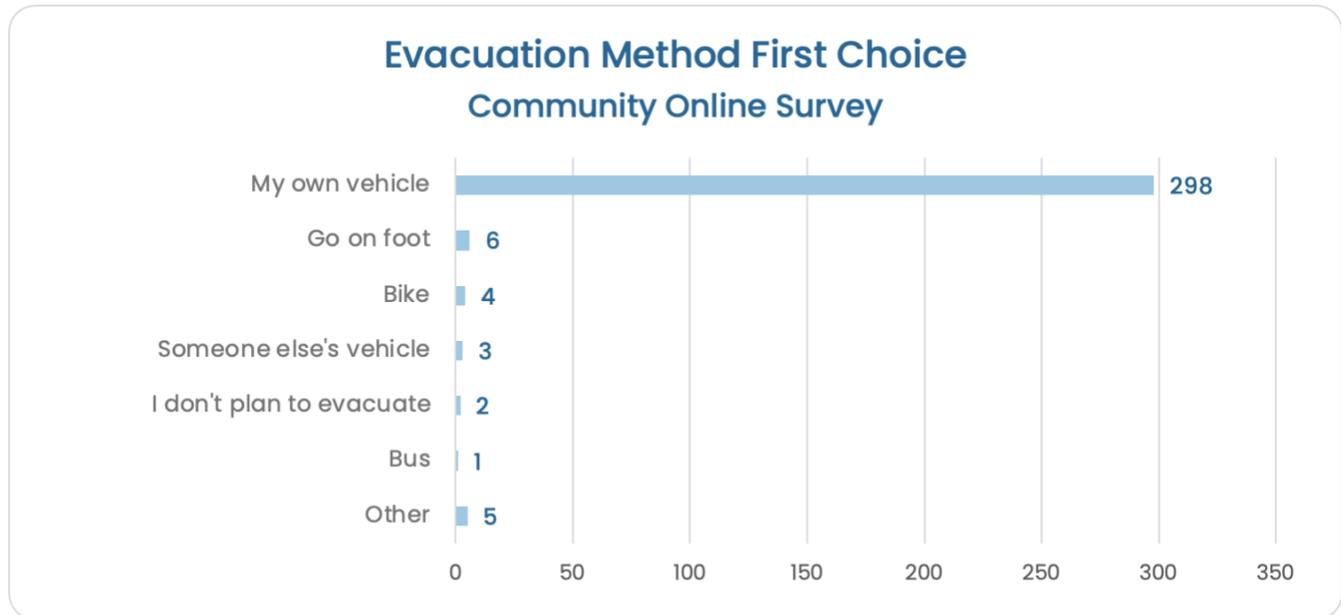


*Figure 20: 2024 CWPP Online Survey, Evacuation Method First Choice*

**Evacuation Method (first and second choices):** In the 2024 CWPP online general survey, respondents were asked about their preferred evacuation methods. Additionally, 225 individuals were asked about their planned evacuation method as part of the 2024 Socially Vulnerable Populations (SVP) Project (see appendices). The findings from both efforts are summarized below; key similarities and differences are pointed out.

Most respondents to the 2024 CWPP online survey (93%) indicated their first choice for evacuation would be using their own vehicle (see Figure 20). Similarly, participants in the 2024 SVP Project also preferred using a personal vehicle as their primary evacuation option. Many stated that they would take all available vehicles, considering them valuable assets they could not afford to lose.

Evacuating in someone else's vehicle is the second choice (~54%) for respondents of the 2024 CWPP online general survey respondents (see Figure 21). The next most popular choices are "Go on foot" (~21%) and by bike (~8%). One respondent indicated that evacuating by bus was their first choice

and nine (~3%) chose the bus as their second choice. Fourteen (14) 2024 online survey respondents (~4%) indicated that they **"don't plan to evacuate."**
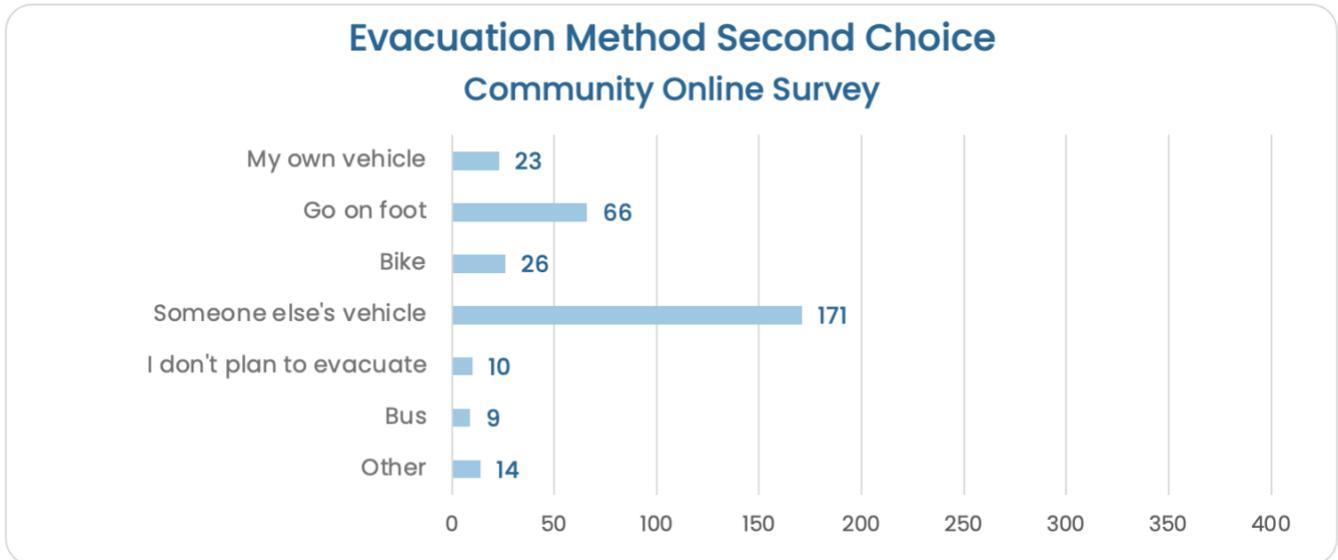


*Figure 21: 2024 CWPP Survey Evacuation Method Second Choice*

The 2024 SVP Project interviewees made similar choices, but indicated that they would go by bike, on foot or by bus slightly more than those who said they would go in someone else's vehicle. Nearly 2% of the SVP interviewees said they would not evacuate.

Researchers at Boise State University plan to send out a survey in 2025 to integrate behavioral science data and transportation engineering models to create more accurate and actionable interdisciplinary evacuation models. The survey data will identify and validate the critical factors that influence household protective action decision-making and evacuation logistics, and integrate social-behavioral data into wildfire evacuation scenario simulations using agent-based models to assess evacuation efficacy.

*"I can't drive and have no car. I have not talked to anyone about going with them."*

-Ashland Resident

# Emergency Notifications

A desire for improved warning systems and multiple alert mechanisms received a Public Interest Rating (PIR) of 35 on a scale of 15-100.

Three (3) studies asked respondents to identify whether they signed up for an emergency alert system. Emergency alert systems provide critical, real-time updates during wildfire events, helping people to stay informed and respond effectively. In 2019, citizens could sign up for Citizen Alert which was operated by Jackson County Emergency Services and/or Nixle which was operated by the City of Ashland. After the Almeda Fire the two systems were merged into a single "Citizen Alert" system. (Note that in March 2025, the Everbridge "Citizen Alert" system was moved to an independent Jackson County emergency notification system called "Jackson Alert").

The percentage of respondents who indicated that they were signed up for emergency alerts is listed below:

- ~30–34% of the 2019 respondents
- ~86% of the 2024 online respondents
- ~47% of the 2024 SVP respondents

The results indicate a significant increase in the number of residents registered for emergency notifications through the combined Citizen Alert system, rising from 30-34% in 2019 to 86% in 2024. However, there is room for improvement, particularly among socially vulnerable households, where fewer than half are using the emergency notification system. However, it's worth noting that the actual number of socially vulnerable individuals enrolled in the system may be higher than reported, as the interviewers did not consistently ask respondents specifically about their Citizen Alert registration. Conversely, participants often mentioned it when answering a broader question about how they stay informed about current wildfire conditions.

During the 2024 SVP Project, approximately 38% of respondents said that they rely on the Watch Duty app for information on wildfires nearby. Additionally, 15% stated they get wildfire updates from friends or family members. However, 9% of respondents admitted they either didn't know where to

get information or had no access to wildfire updates, highlighting a critical concern for evacuation planning.

## Smoke Impacts

Over the past fifteen (15) years, Ashland and the Rogue Valley have suffered some of the worst air quality in the country because of regional wildfires. Over the past decade, Southern Oregon has experienced an **8.7-fold increase** in wildfire smoke compared to the previous ten (10) years, according to the Oregon Department of Environmental Quality (ODEQ) (2022). Looking ahead, forecasts from the National Interagency Fire Center (NIFC) (2025) predict hotter, drier conditions that will further intensify fire activity. These trends put communities like Ashland at greater risk of wildfire damage and prolonged smoke exposure.

Smoke has immediate effects and long-term accumulated health impacts. Children, anyone who works outside, persons with pre-existing conditions, pregnant women and older adults are at greater risk of physical harm from smoke. Far-reaching health, economic, and social implications of not addressing smoke adequately are too great to ignore. Severe smoke causes harm to businesses, residents and people of all income levels, outdoor recreationists, student athletes, and healthy adults.

The Oregon Health Authority found that summer wildfire smoke has significantly impacted Oregon healthcare. When air quality becomes increasingly unhealthy, it triggers health alerts and increased hospital visits. Hospitals and health systems have had to close facilities, move patients, and delay procedures due to the smoke.

In the days after the Almeda Fire, a record-breaking Air Quality Index (AQI) reading of 900 was recorded on an ODEQ regulatory monitor at Ashland Fire & Rescue's Station #1. A comprehensive approach is needed to address recurring smoke events affecting Ashland.

In 2021 the City of Ashland developed the Ashland Community Response Plan for Smoke to address some of the concerns. Primary goals are to collaboratively identify and implement strategies for reducing harm from wildfire smoke disasters before they happen and to increase the use of prescribed fire for reducing community wildfire risk. Necessary elements include:

- **Identification of Smoke-Vulnerable Populations:** The plan identifies groups particularly susceptible to smoke-related health issues, such as children, the elderly, and individuals with respiratory conditions. This allows for targeted interventions to protect these populations.

- **Communication and Notification Strategies:** The plan outlines methods for informing the public about fire incidents, smoke impacts, and air quality updates. This includes utilizing various communication channels to ensure timely and accurate information dissemination.

- **Health Protection Measures for Smoke-Vulnerable Groups:** The plan proposes options to safeguard the health of smoke-vulnerable populations during periods of poor air quality, such as establishing clean air shelters and distributing high-efficiency particulate air (HEPA) purifiers. For example, the city received a grant to provide 500 HEPA purifiers to smoke-vulnerable residents.

- **Coordination Among Agencies:** The plan emphasizes collaboration between entities conducting prescribed burns, local public health authorities, and the community to manage and communicate about smoke effectively.

Several initiatives from this plan have been implemented, with the assistance of federal and state grants. This has led to improved community awareness of smoke's health impacts. Efforts have included an updated website, regular communication, health education resources, in-person classes, HEPA purifiers, N-95 respirators, and business forums.

However, gaps remain, and federal funding for existing programs is currently uncertain. There are no plans to hire city staff to implement the plan, and collaborating agencies lack dedicated full-time staff. As a result, Ashland and surrounding communities struggle to meet the demand for health education and community planning before, during, and after smoke emergencies. The Jackson County Community Response Plan for Smoke has not been adopted, so Ashland stands out as the only city in the county to have a smoke impacts mitigation plan.

## Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Community Health and Safety Challenge Statements |
|---|
| **Challenge HS-1:** Emergency notifications and advisories are not accessible to everyone, are confusing to some members of the community, and the communication system has operational weaknesses. |
| **Challenge HS-2:** Many are concerned that safe evacuation during an event will be extremely difficult for many reasons, including not having the means to evacuate, confusion about what to do and where to go, blocked roads, and fallen utility poles. |
| **Challenge HS-3:** While the city has a 4-year-old community smoke impact response plan, it has not been adequately funded and fully implemented. Community awareness of smoke impacts on public health and proactive protective measures could be improved. |
| **Challenge HS-4:** Local citizens and commuters are concerned about their health and safety during a wildfire event. Some fear they will be unable to receive health care or survive if they can't evacuate. |

*Figure 22: Community Health and Safety Challenge Statements*

## Baseline Conditions

- Evacuation and critical alerts rely on internet connectivity.
- Everbridge was the primary platform for phone, email, and text notifications but that changed on March 3, 2025 to an independent notification platform.
- Only the Emergency Management Coordinator can issue evacuation notifications in Ashland.
- Under ideal conditions, citywide evacuation takes ~4 hours; the North Mountain ramp saves ~10 minutes.
- There are limited evacuation routes: I-5 exits (11, 14, 19), the North Mountain emergency ramp, Highway 99 & 66, and USFS roads to Mt. Ashland.
- Highways 99 & 66 access can be impaired when I-5 traffic is stopped or diverted.

- Residents are advised to follow the 2021 Evacuation Zone Map for guidance.

- Jackson County published evacuation zones for the entire county in the spring of 2024.

- Police, fire, streets, ODOT, and other city resources conduct evacuation training. An Evacuation Task Force is established to coordinate mass evacuation strategies with city and response partners.

- The National Weather Service (NWS) issues regular Red Flag warnings.

- Since 2018, Ashland has faced some of the worst air pollution in the U.S., harming health and the economy.

- The Community Response Plan for Smoke identifies vulnerable populations, protection measures, education, notifications, and interagency roles. Some public and business buildings have indoor/outdoor air quality sensors, but coverage is incomplete.

- SmokeWise web tools and a school curriculum are available, and more than 700 residents have received donated HEPA purifiers since 2020.

- A temporary, grant-funded city employee supports SmokeWise Ashland part-time, and those grant funds will run out.

- A full-time Ashland Emergency Management Coordinator was hired in 2022.

- The City of Ashland currently advises against sheltering in place during wildfire.

## Desired Conditions

- Emergency notifications are sent before, during, and after wildfires.

- Alerts are accessible, clear, and understandable for all residents and commuters.

- The city ensures emergency communications function flawlessly, even while people are asleep.

- A secondary system prevents any disruption in information flow to the public and first responders.

- Roads are clear of fuels, wide enough for multiple vehicles, and protected from falling power poles and lines.

- Evacuation Zone Maps and route instructions are well-marked and proven effective.

- The city collaborates with researchers and consultants to enhance evacuation routes and practices.

- The city updates the 2021 Evacuation Time Estimate (ETE) with improvement recommendations on a set schedule.

- City departments train regularly to maintain and manage open evacuation routes.

- Resources are in place to quickly remove broken-down vehicles and restore traffic flow.

- Public advisories are coordinated with NWS Red Flag Warnings, ensuring community-wide notification.

- Ashland's Community Response Plan (2021) is revised and re-adopted by 2026.

- All residents have effective smoke protection systems and follow outdoor safety precautions.

- Businesses minimize smoke exposure for visitors, clients, and employees.

- Community members have access to temporary clean-air spaces during smoke events.

- Hospitals, healthcare centers, and public spaces are hardened against wildfire and smoke.

- Students learn how to protect themselves and their families from the negative impacts of smoke.

- A regional Joint Emergency Operating Center (JEOC) ensures accurate, timely information for emergency and public health responders.

- Evacuation zones include city-approved shelters and open spaces for those unable to evacuate.

- Hospitals and healthcare facilities remain operational during wildfires, and ambulance services are available.

- Clear shelter-in-place guidelines are accessible upon request and where appropriate.

- Multiple designated wildfire-safe shelters and outdoor refuge locations are known and understood by the public.

- Commuters and tourists have clear evacuation and sheltering guidance.

## Tracking Metrics

- Number of community members and Socially Vulnerable Population (SVP) households registered for emergency notifications.

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- Number of complaints received, number of failures or issues reported.

- Number of evacuation events assessed.

- Total length of wildfire-hardened evacuation routes.

- Count and distribution of city-designated evacuation areas.

- Number of citizens and visitors aware of evacuation zones, go-kits, and emergency evacuation alternatives if they can't escape.

- Number of days AQI exceeds 100.

- Total hours clean air spaces are available to the public.

- Number of public buildings with air filtration systems.

- Number of HEPA purifiers and filters distributed to socially vulnerable people.

- Number of public organizations and schools with smoke plans.

- Number of awareness raising events and after-action reviews.

## Monitoring Plan

- Remeasure where Ashland is at in these areas every 1-3 years to determine how things have changed and to measure tracking metrics listed above.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created, and projects receive funding.

| Community Health and Safety Initiatives | |
|---|---|
| **Challenge HS-1:** Emergency notifications and advisories are not accessible to everyone, are confusing to some members of the community, and the communication system has operational weaknesses. | |
| HS-1.1 | Train two new staff for emergency communication system backup. |

| HS-1.2 | Form an interdepartmental emergency notification team, provide training, and conduct regular system evaluations. |
|---|---|
| HS-1.3 | Improve public communication strategies for wildfire emergencies. |
| HS-1.4 | Install community alert sirens. |
| HS-1.5 | Develop backup communications plan for network failures. |
| **Challenge HS-2:** **Many are concerned that safe evacuation during an event will be extremely difficult for many reasons.** | |
| HS-2.1 | Assess wildfire exposure hazards on primary evacuation routes and possible refuge areas and mitigate. |
| HS-2.2 | Test and refine evacuation traffic management strategies. |
| HS-2.3 | Inspect evacuation routes and hydrants annually. |
| HS-2.4 | Explore widening arterial routes for better evacuation flow and engage the public to resolve conflicts (e.g., bike lanes). |
| HS-2.5 | Parking Restrictions: Consider limiting street parking on Red Flag Warning days. |
| HS-2.6 | Install additional traffic cameras at key locations. |
| HS-2.7 | Evaluate and improve Evacuation Zone signage across the city. |
| HS-2.8 | Integrate Red Flag Warnings into Jackson Alerts. |
| HS-2.9 | Improve public education on evacuation zones and routes. |
| HS-2.10 | Partner with social service organizations to develop action plans for seniors, low-income, housing-insecure, disabled, and unhoused populations. Secure funding for planning and implementation. |

| HS-2.11 | Coordinate evacuation information and planning with local schools. |
| HS-2.12 | Update the 2021 Evacuation Time Estimate study by 2028. |
| HS-2.13 | Strengthen citywide and regional evacuation readiness. |
| HS-2.14 | Expand evacuation zones regionally. |
| HS-2.15 | Establish a task group to improve regional emergency preparedness. |
| **Challenge HS-3:** The city has a 4-year-old community smoke impacts response plan, but it has not been adequately funded and implemented. Community awareness of smoke impacts on public health and proactive measures could be improved. | |
| HS-3.1 | Update the Community Smoke Response Plan (CRP) annually or as warranted. |
| HS-3.2 | Integrate the evolving CWPP recommendations into the CRP. |
| HS-3.3 | Expand air quality monitoring at public buildings. |
| HS-3.4 | Educate residents and integrate smoke resilience into school curricula. |
| HS-3.5 | Enable inclusive smoke resilience engagement citywide. |
| HS-3.6 | Support businesses in mitigating smoke impacts on employees and visitors. |
| HS-3.7 | Optimize public indoor spaces for clean air during smoke events. |
| HS-3.8 | Collaboratively expand capacity and infrastructure at Ashland's Joint Emergency Operations Center (EOC). |

| **Challenge HS-4:** Citizens and commuters are concerned about their health and safety during a wildfire event. Some fear they will be unable to receive care or survive if they can't evacuate. | |
|---|---|
| HS-4.1 | Collaboratively expand capacity and infrastructure at Ashland's Joint Emergency Operations Center (EOC). |
| HS-4.2 | Standardize NIMS ICS and disaster training for all employees. |
| HS-4.3 | Develop a plan to sustain healthcare services during wildfires. |
| HS-4.4 | Partner to establish mass care and shelter locations. |
| HS-4.5 | Be prepared to address wildfire-related mental health impacts. |
| HS-4.6 | Evaluate and plan for use of hospitals, schools, and assisted-living facilities as refuges. |
| HS-4.7 | Identify outdoor refuge areas for trapped individuals and make them known. |
| HS-4.8 | Assess risks and benefits of designated assembly points. |
| HS-4.9 | If viable, define actions to establish and manage temporary shelter areas, and work with property owners to secure funding and ensure these sites are safe and suitable for use. |

*Table 9: Community Health and Safety Initiatives*

# Section 5

# Residential Risk Reduction

# Section 5: Residential Risk Reduction

## Introduction

This section examines the challenges associated with enabling residents to reduce the threat of wildfire to their places of residence. Residential risk reduction strategies were informed by complementary studies that highlight the perspectives of residents in different locations and housing types. The focus is primarily on homeowners, but renter's perspectives are included. Renter issues and concerns are addressed in detail in Section 6. Socially vulnerable household perspectives are introduced here, with a deeper exploration of their needs in Section 7.

## Motivating Action

Social science research over two (2) decades focused on determining best practices for reducing wildfire risk in communities has found that the most effective strategy is the development of trust-based relationships through direct engagement with residents (Madsen, et al., 2018; Dickinson et al., 2015; McCaffrey et al., 2011, 2013; Steelman and McCaffrey, 2013; Paveglio et al., 2009; and Martin et al., 2009). Personal engagement helps people take responsibility for their property and encourages neighbors to follow suit.

Recent studies emphasize the significance of trust-based relationships and 1-on-1 engagement in encouraging homeowners to mitigate wildfire risks. For instance, Steelman and McCaffrey (2013) highlight that effective communication before and during wildfires, facilitated through established trust and interactive dialogue, leads to more flexible and accepted fire management strategies. Similarly, Paveglio et al. (2018) propose tailored approaches for wildfire adaptation, emphasizing the need to consider social diversity and local contexts to foster community engagement in risk reduction efforts.

While it is physically impossible to develop a trust-based relationship through face-to-face engagement with more than 21,000 residents in a short time, citizens were asked to make their perspectives and ideas about wildfire known through a series of qualitative and quantitative studies.

# Discovery Process

In 2015, 2019, and 2024, the city supported quantitative and qualitative studies involving approximately 2,145 participants. These studies explored homeowners' and renters' perspectives on wildfire risk reduction, employing a variety of methodologies. Below is a brief overview of each project.

In 2015, the City of Ashland engaged the Center for Social Ecology and Public Policy to conduct a qualitative research project aimed at involving residents in discussions about fire and preparedness, in anticipation of updating the CWPP. Researchers reached out to 437 individuals; however, the study did not specify the number of homeowners versus renters among the respondents. The authors reported distinct differences in perspectives – homeowners' concerns were closely tied to their strong connection to their residences, while renters were primarily worried about their lack of control over living conditions, evacuation procedures, and personal safety (Preister, et al, 2015).

In 2019, a mail-in survey targeted occupants of single-family homes within Ashland's Wildland Urban Interface (WUI), yielding 1,136 responses. 97% of respondents were homeowners, indicating that the findings predominantly reflect the experiences and concerns of homeowners in these high wildfire-risk areas (USDA Forest Service, 2020). Insights from this homeowner-centric sample do not fully represent the perspectives of renters or residents in other housing types. Consequently, wildfire preparedness strategies derived from this data should be carefully considered before being applied to the broader Ashland population.

In 2024, and in preparation for an updated 2025 City of Ashland CWPP, a city staff and volunteer team conducted three (3) data collection projects to gather current perspectives from various segments of Ashland's population, as shown in the table below.

| General Survey (n=313) | Homeowner | Renter |
|---|---|---|
| Not vulnerable, not senior | 91 | 18 |
| Not vulnerable, senior | 125 | 6 |
| Vulnerable, not senior | 25 | 14 |
| Vulnerable, senior | 25 | 9 |
| **Totals** | **266** | **47** |

*Table 10: General Population Resident Type*

| Socially Vulnerable Pop (n=225) | Homeowner | Renter |
|---|---|---|
| Not vulnerable, not senior | 10 | 42 |
| Not vulnerable, senior | 23 | 17 |
| Vulnerable, not senior | 12 | 58 |
| Vulnerable, senior | 36 | 27 |
| **Totals** | **81** | **144** |

*Table 11: SVP Population Resident Type*

1. **General Population CWPP Survey:** An online open survey collected responses from the general population. The respondents included 266 homeowners and forty-seven (47) renters. Nearly 23% of all respondents identified as low income, disabled, living in crowded conditions, had children living with them, or had limited English proficiency. Of these, about 16% were homeowners and 7% were renters.

2. **Socially Vulnerable Populations (SVP) Project:** This initiative focused on understanding the perceptions of wildfire risk among socially vulnerable households who are low income, housing insecure, disabled, seniors, or have limited English-speaking proficiency. This was completed through face-to-face interviews. Eighty-one (81) respondents said they were homeowners, and 144 said they were renters.

3. **Rental Property Assessment:** In 2024, a survey of rental properties was conducted to gain insights into measures taken to protect rental assets and tenants. An online survey engaged eight (8) property management companies overseeing nearly 4,100 rental units. Other outreach to private rental owners yielded limited participation, with only twenty-two (22) owners managing forty-four (44) units responding.

Respondents to the surveys and interviews in 2024, included 347 homeowners and 191 renters, providing a current sample of residents' perspectives on wildfire risk. Roughly half of the sampled population were seniors. The dataset reflects more diversity than prior wildfire-related social science surveys in Ashland. While the substantial volume and variety of data doesn't fully represent the community, it will inform future customizable approaches to better meet the needs of homeowners, tenants, rental property owners, seniors and other socially vulnerable populations living in a variety of housing types.

A more in-depth summary and description of each investigation is available in the Voices from the Whole Community Report in the appendices.

In the next section, questions relevant to protecting Ashland residents who live in all housing types are answered using the data collected in the studies described above.

# Wildfire Risk Awareness Findings

Experience has demonstrated that sharing the results from systematic data collection with the community provides a common platform for constructive discussion about adapting to wildfire (USDA Forest Service 2020).

## Resident Engagement and Understanding

In 2019, a survey of approximately 1,140 Ashland residents revealed that while many financially stable, older single-family homeowners are aware of wildfire risks and defensible space requirements, their preparedness levels vary. Neighborhood participation in risk reduction efforts ranged from 40% to 73%. 14% of respondents incorrectly believed that local firefighters have sufficient capacity to protect all homes, indicating a misunderstanding of firefighting resource limitations. Additionally, there were misconceptions about home or structural hardening, with a disconnect between perceived and actual fire-resistant construction features. A small minority either dismissed the effectiveness of homeowner actions or believed wildfire prevention was not their responsibility. About 45% of respondents acknowledged that wildfire could severely damage or destroy their homes, highlighting both awareness and vulnerability (USDA Forest Service, 2020).

In 2024, online surveys and interviews revealed varied perceptions of wildfire risk influenced by housing type and personal experiences. Approximately 32% of respondents admitted they "don't know or don't think about" wildfire safety, and about 47% felt "some degree of safety" despite Ashland being designated as a Wildfire Hazard Zone. Single-family homeowners generally felt the safest.

Renters in apartments and studio/ADU/cottages expressed mixed feelings, frequently citing concerns about inadequate property maintenance, and reliance on rental property owners for fire mitigation efforts. Some apartment residents highlighted the importance of surrounding conditions, while condominium and townhouse dwellers noted challenges with shared walls and limited clearance around buildings. Mobile/manufactured home residents emphasized risks related to flammable materials, dense vegetation, and aging infrastructure, underscoring the importance of preparedness through ignition-resistant building materials.

Respondents from all datasets demonstrated some awareness of wildfire risks, but their concerns and level of engagement varied significantly. Mobile/manufactured home and single-family homeowners mentioned external environmental threats, while apartment dwellers highlighted urban-specific risks, such as maintenance issues and inadequate infrastructure. Many respondents, regardless of housing type, called for collective action, stricter enforcement of fire mitigation standards, and improved education. Although proactive mitigation measures, such as creating defensible spaces, are understood by many, these efforts are widely recognized by fire scientists as insufficient to fully counter the risks posed by severe wildfires.

Single-family homeowners are most engaged in wildfire preparedness. Residents of multi-unit/family and rental housing often face challenges due to structural vulnerabilities and limited control over fire prevention measures. To address these disparities, community-wide efforts should be tailored to different housing types and socioeconomic conditions.

## Communication

The 2019 and 2024 surveys reveal that preferred methods for receiving wildfire risk information varies by demographic group. In the 2019 survey of presumably more secure single-family homeowners, the preferred information sources were mailed newsletters (71%), email newsletters (67%), and in-person interactions (58%). In 2024, online survey respondents ranked on-site risk assessments as

their top choice (37%), followed by the City of Ashland website (26%), while handouts, social media, and videos were moderately ranked. In the 2024 Socially Vulnerable Population (SVP) project, interviewees were not asked to rank preferences, but 16% reported learning from direct engagement with city staff or volunteers, aligning with the general survey preference for on-site risk assessments. Approximately 22% of SVP interviewees reported not receiving any wildfire safety information, revealing a major outreach gap, particularly among apartment dwellers.

Findings highlight key challenges in wildfire education and outreach. While direct engagement and site assessments are preferred, many residents, especially socially vulnerable renters, indicate they don't get information. This means that posting information on the City of Ashland website, flyers, and other messaging media does not meet the city's "equity of access". To improve outreach, a combination of in-person engagement, digital accessibility, and targeted messaging followed by assistance through trusted community channels is warranted.

## Limiting Factors Findings

In the 2019 mail-in survey, the 2024 online general survey, and the 2024 SVP Project, interviews highlight a range of barriers preventing Ashland residents from reducing wildfire risk to their homes. Physical limitations and lack of knowledge were significant obstacles in the 2019 survey (49% and 38%, respectively), with financial limitations also cited (35%). The 2024 online general survey revealed that neighbor-related issues (32.3%) and cost (28.2%) were the top challenges, with fewer respondents indicating physical limitations (21%). Renters, particularly in the SVP cohort, faced unique barriers, with 33% stating that reducing wildfire risk was not their responsibility due to rental agreements.

Cost, time, and aesthetic preferences were recurring themes across all surveys. Some respondents were unwilling to alter their property's appearance; 21% in the 2019 survey and 7% in the 2024 online survey. Disengagement or apathy affected a small portion of participants.

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A complete list of obstacles respondents identified to making their homes safer are provided in the survey results in the appendices. The primary obstacles indicated were:

- Lack of knowledge
- Not allowed
- Not their responsibility
- Not their problem
- Physical limitations
- Cost
- Time constraints
- Can't find help
- Don't want to change

The number and diversity of barriers indicated by respondents underscores the inherent complexity of wildfire risk reduction. Challenges are complicated by housing type, socioeconomic status, and property ownership. Emotional attachment further highlights the need for both pragmatic and empowering solutions.

## Workforce Findings

A common challenge highlighted by respondents across all studies, as well as by city staff and volunteer wildfire risk assessors, is the lack of a properly trained workforce to implement home-hardening retrofits and ignition-resistant landscaping. While new construction with permits requires ignition-resistant materials and landscaping, homeowners seeking to upgrade existing structures often struggle to find skilled workers. Assessors frequently hear from residents who are unable to secure help and are often asked for recommendations for contractors, handypersons, or landscape service providers.

Many companies and online resources promote "home-hardening" techniques and materials, but when taken out of context, some recommendations may be unnecessary or counterproductive. Uninformed or misinformed actions can increase risk rather than reduce it, such as:

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- **Roofing Choices:** A properly installed asphalt fiberglass roof can offer better protection than a poorly assembled metal roof—at about half the cost.

- **Flammable Mulch:** Despite widespread guidance against using bark mulch near structures, new shipments continue arriving, and homeowners routinely place it too close to buildings.

- **Non-Compliant Fencing:** Even though a 2018 ordinance prohibits wooden fences and gates within five (5) feet of structures, many contractors and DIY homeowners install them without permits.

- **Overplanting by Landscapers:** Clients often prefer an immediate, lush look, leading landscapers to overplant. As these plants mature, they create dense fuel ladders and continuous fuel beds that become expensive to mitigate years later.

- **Combustible Plant Sales:** Local nurseries and big-box stores sell highly combustible plants like arborvitae, juniper, and dwarf conifers. These species are popular because they are evergreen, deer-resistant, and inexpensive, but they also trap dry, dead materials and contain oils, resins, and terpenes that ignite easily.

Another challenge is the relationship between homeowners and workers. Clients trust contractors and landscaping companies to make informed decisions, but not all of them prioritize wildfire resistance. For example:

- A large local landscaping company has told clients that ignition-resistant landscaping "won't make a difference," leading to missed opportunities for risk reduction.

- Many landscape maintenance workers (often called "blow and go" crews) focus only on what the client requests, which may not be appropriate.

- Some well-informed workers suggest fire-safe landscaping options, but client education and interest are inconsistent.

The City of Ashland cannot recommend specific vendors to residents but provides a contractors list on its website. To be included, contractors must review materials and sign an acknowledgment agreeing to follow municipal codes and ordinances. Additionally, there is no continuing education requirement, and due to limited resources, the city cannot verify whether listed contractors adhere to regulations. Addressing workforce gaps, misinformation, and inconsistent contractor practices is essential for improving wildfire resilience in Ashland. A well-trained workforce, better public

education, and stronger accountability measures can help homeowners make informed, effective choices for ignition-resistant upgrades, ultimately reducing communitywide risk.

## Challenges

Findings have been distilled into "challenge statements." Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are also listed.

| Residential Risk Reduction Challenge Statements |
| --- |
| **Challenge RR-1:** Residents' perceptions of wildfire risk vary significantly by housing type, location, ownership, and experience, leading to inadequate preparations. |
| **Challenge RR-2:** Physical/functional limitations prevent many residents from conducting wildfire risk reduction work. |
| **Challenge RR-3:** Financial constraints pose a significant barrier to wildfire risk reduction across all demographic groups. |
| **Challenge RR-4:** Collective residential risk reduction is essential to protect everyone, yet many neighbors do not participate, or their efforts are inadequate even when they are in a NFPA designated Firewise USA® Neighborhood. |
| **Challenge RR-5:** Licensed and unlicensed workers are either not empowered to, are unaware of, or choose not to follow fire-resistant construction and/or landscaping best practices and some residents don't want to make recommended adjustments to be wildfire safe. |

*Figure 23: Residential Risk Reduction Challenge Statements*

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## Baseline Conditions

- ~32% of residents don't know or don't think about the potential for wildfire to affect their home.

- ~47% of residents feel that their home is relatively safe or very safe.

- Most apartment dwellers report not getting information.

- People get information in a variety of communication modalities but prefer personal on-site learning.

- No baseline conditions information for commuters and visitors.

- 21-49% of households indicate that physical capacity to do work is a constraint.

- 26% of self-identified disabled residents said they are incapable of doing the work.

- 76% of predominantly older (65+ years) single-family households indicate they would like physical assistance.

- One of the Rotary Clubs currently provides basic fuels reduction assistance to low income and disabled residents upon special request when they get a home-site risk assessment.

- 24-35% of households claim they can't afford to get wildfire risk reduction work done.

- Low-income residents are eligible for utility subsidies.

- 32-40% of respondents cited neighbor's inaction as a barrier to risk reduction.

- Ashland has 32 recognized Firewise USA® neighborhoods within city limits as of January 1, 2025.

- Contractors currently self-identify on the city website that they have read, understand, and will abide by municipal codes.

- Workers can volunteer for wildfire risk reduction training, but relatively few choose to participate.

- Home-hardening training is not available.

- Landscaping best-practices training is rarely offered.

- Landscaping maintenance workers have not been offered training in Ashland.

## Desired Conditions

- 90% of citizens can accurately describe their wildfire risk where they live.

- Personalized wildfire risk assessments are iterative and reinforcing.

- Physical/functional challenges are not an obstacle to reducing residential wildfire risk in Ashland.

- Cost is not an obstacle to reducing residential wildfire risk in Ashland for those who really can't afford to do the work.

- Every household in Ashland is part of an active wildfire risk reduction group.

- Community networks such as Firewise USA® neighborhoods do not require direct support from the city, but they remain active.

- A list of "certified" contractors and landscaping workers is readily accessible to everyone.

- 90% of workers are properly trained and certified to meet wildfire risk reduction standards approved by the city.

- 90% of clients seek out qualified contractors and landscaping service providers.

## Tracking Metrics

- Number of residents who can accurately describe the wildfire risks where they live.

- Number of residents who are clearly reducing wildfire risks to their property.

- Number of physically/functionally challenged citizens who receive assistance/year.

- Number of financially challenged households who receive financial assistance/year.

- Percent of in-kind contributions per dollars spent.

- Number of organizations providing assistance at no cost to the applicant.

- Number of residents who are working with their neighbors to reduce wildfire risk.

- Number and type of collective action organizations such as Firewise USA® neighborhoods.

- Evidence that collective action groups are meaningfully reducing makes a difference.

- Number of service providers trained and certified to meet City of Ashland standards.

- Number of clients who use qualified service providers.

- Number of satisfied clients and celebratory events.

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## Monitoring Plan

- Use technology and on-site visits to prioritize treatment areas every 3-5 years depending on funding and data collection capacity.

- Randomly sample service providers and clients every 3-5 years.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Residential Risk Reduction Initiatives | |
|---|---|
| **Challenge RR-1:** Residents' perceptions of wildfire risk vary significantly by housing type, location, ownership, and experience, leading to inadequate preparations. | |
| RR-1.1 | Expand and promote wildfire risk reduction programs, including public education, home assessments, community outreach events, school programs, grant incentives (e.g., FEMA), and Fire Adapted Ashland initiatives across digital and public platforms. |
| RR-1.2 | Refine messaging, education, and outreach strategies based on 2024 survey results and CWPP public input. |
| **Challenge RR-2:** Physical/functional limitations prevent many residents from conducting wildfire risk reduction work. | |
| RR-2.1 | Facilitate groups, organizations, and volunteers doing defensible space work for physically or functionally challenged households. |
| RR-2.2 | Create a sustainable program to assist physically challenged households to create and maintain fire-hardened residences and defensible space around their homes. Consider modeling the program based on the Nevada County Fire Safe Council Functional Needs Program (n.d.). |

| RR-2.3 | Partner with the HASL Center for Independent Living to connect individuals with disabilities and seniors to disaster preparedness and mitigation resources. |
|---|---|
| RR-2.4 | Encourage personal support networks for physically challenged residents. |
| **Challenge RR-3:** Financial constraints pose a significant barrier to wildfire risk reduction across all demographic groups. | |
| RR-3.1 | Complete administration and implementation of the 2020-2025 FEMA funded fuels reduction grant. |
| RR-3.2 | Secure additional fund sources to incentivize and directly assist residential home hardening and defensible space work. |
| RR-3.3 | Explore local revenue options to support residential risk reduction work. |
| **Challenge RR-4:** Collective residential risk reduction is essential to protect everyone, yet many neighbors do not participate, or their efforts are inadequate even when they are in an NFPA designated Firewise USA® Neighborhood. | |
| RR-4.1 | Encourage neighborhood efforts to attain code compliance and wildfire risk reduction best practices, while simultaneously minimizing neighborhood or network dependence on City of Ashland oversight and financial assistance. |
| RR-4.2 | Provide wildfire risk reduction guidance for multi-family complexes. |
| RR-4.3 | Develop a neighborhood risk reduction program based on the best available science and published recommendations by the IBHS. |
| **Challenge RR-5:** Licensed and unlicensed workers are either not empowered to, are unaware of, or choose not to follow fire-resistant construction and/or landscaping best practices and some residents don't want to make recommended adjustments to be wildfire safe. | |
| RR-5.1 | Identify companies and workers who consistently meet wildfire risk reduction codes requirements and best practices standards. Promote good work. |

| RR-5.2 | Develop, test, and monitor methods to keep workers informed of current codes, ordinances, and best practices. |
|---|---|
| RR-5.3 | Update weed abatement regulations to address residents' misunderstandings and enforcement challenges. |
| RR-5.4 | Update municipal code to comprehensively and systematically address all wildfire risk work done by all kinds of workers. |
| RR-5.5 | Maintain and update the city's wildfire risk reduction contractor list through outreach, training, and removal of consistently poor performers. |
| RR-5.6 | Engage landscapers, nurseries, designers, and builders to foster cooperation and promote desired wildfire risk reduction products and best practices. |

*Table 12: Residential Risk Reduction Initiatives*

2025 Ashland Community Wildfire Protection Plan

Section 6

# Preparedness for Renters

# Section 6: Preparedness for Renters

*"I am a renter, and I don't have authority or money to do what the landlord should do as regular maintenance."*

–Ashland Renter

## Introduction

The 2022 U.S. Census reports that approximately 47% of residents in Ashland are renters. Around 35% of all occupied housing units in the United States are rented (U.S. Census Bureau, n.d.). The high rate of rental properties in Ashland poses several wildfire safety challenges, including: a transient population needing constant education, absentee property owners, and rising home insurance costs leading to higher rent, while renters remain underinsured or uninsured.

This chapter identifies strategies and activities to motivate and enable tenants and rental property owners/managers to reduce the potential for wildfire to adversely affect renter households and rental properties.

## Process

In 2024, 191 Ashland renters were engaged through separate qualitative and quantitative surveys. A total of forty-seven (47) renters responded to an online general CWPP survey, and another 144 renters responded to face-to-face interviews. Many renters also identified as being a part of one or more Socially Vulnerable Populations (SVP) in Ashland; see more information in Chapter 7. Separately, property management companies and private rental property owners were invited to participate in two customized surveys. The findings from these surveys are incorporated into this action plan and form the basis for the initiatives. Detailed reports of the survey's findings are located in the appendices.

# Findings

Renters living in apartments and studio/accessory dwelling unit (ADU)/cottages expressed mixed feelings, frequently citing concerns about inadequate property maintenance and reliance on property owners for wildfire risk reduction efforts. Some apartment residents highlighted the importance of surrounding conditions, while condominium and townhouse dwellers noted challenges with shared walls and limited clearance around buildings.

Covenants, Conditions, and Restrictions (CC&Rs) from Homeowners' Associations (HOAs), and rental property owners were cited as barriers to wildfire risk reduction. SVP renters were nearly three (3) times more likely to report such limitations compared to the general population.

Eight (8) property management companies responded. They serve clients in all housing types in Ashland and collectively manage 973 rental buildings, containing 4,066 rental units. About 74% of these units are apartments and 12% are single-family residences. There were several property management companies, managing hundreds of apartment units, who did not participate in the survey.

The property management companies surveyed identified a minimum amount of risk-adverse landscaping work taking place, and almost no engagement with tenants to educate and enable their personal wildfire risk reduction. The companies' ability to address issues is largely controlled by the owners.

Approximately 50% of privately managed rentals are single-family homes and about 34% are studio/accessory dwelling unit (ADU)/or a room, or rooms, in a private residence.

Of the private rental owners who responded, many would benefit from, and appreciate having more customized information on what to include in lease agreements, along with how to properly manage their rental properties to significantly reduce wildfire risk.

Many rental property owners rely on contractors to create and maintain "fire-hardened" buildings and/or "defensible space", yet, based on qualitative field observations, most contractors don't do what's needed.

Based on survey data, between 7-50% (depending on housing type) of tenants are responsible for landscape maintenance. This creates a dilemma where the lease may only require minimal upkeep that isn't consistent with current wildfire safety recommendations.

Most tenants, regardless of housing type, have a lack of agency to reduce wildfire hazards where they live. Lack of agency refers to the idea that respondents do not believe they have control over, or responsibility for, making their homes safer. Rather, they believe that responsibility or control rests in the hands of rental property owners or managers, mobile or manufactured home park owners or managers, or the HOAs.

## Challenges

Findings have been distilled into "challenge statements." Baseline and desired conditions are identified to establish a foundation for action. Monitoring metrics are listed and proposed monitoring requirements are identified.

| Renter Preparedness Challenge Statements |
| --- |
| **Challenge RE-1:** Most renters lack authority to implement risk reduction measures. Rental owners and property management companies (by proxy) are ultimately responsible for reducing wildfire risk, but they don't appear to have incentive or motivation to take necessary action. |
| **Challenge RE-2:** Renters living in multi-unit housing face greater challenges. Many renters don't understand wildfire risk or are not motivated to learn. |
| **Challenge RE-3:** In the aftermath of wildfire, the availability of affordable rental homes in Ashland may become severely limited, potentially forcing many residents to relocate. |

*Figure 24: Renter Preparedness Challenge Statements*

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## Baseline Conditions

- Property management companies manage at least 4,066 rental units.

- Renters' lack of agency to reduce their wildfire risk.

- Wildfire risk reduction responsibilities are poorly understood.

- Wildfire risk itself is poorly understood.

- Property owners want to maximize their income and minimize expenses.

- Renters don't want their rents to increase.

- Renters assume service property owners and HOAs are doing the right thing.

- Inadequate knowledge about what to do and who is responsible.

- Many renters are not capable, are too busy, or lack resources.

- The amount of wildfire risk reduction measures needed, particularly for older rental buildings, is significant.

## Desired Conditions

- Renters are aware, engaged, insured, and feel comfortable living in Ashland because wildfire risks have been addressed, and rents are not increased solely because of enhanced wildfire risk reduction activities.

- Property owners and property management companies comply with City of Ashland wildfire safety codes and continually maintain their properties in a state of wildfire-readiness.

## Tracking Metrics

- Number of rental buildings that meet IBHS "Base Standards" or equivalent (e.g., compliant with Ashland "defensible space" codes and ordinances).

- Number of rental property owners who are actively engaged in reducing their rentals wildfire risks (no current baseline).

- Number of renters engaged in appropriate wildfire home risk reduction (no current baseline).

## Monitoring Plan

- Create a study to sample and resample the same renters, property owners, and property management companies at one, three, and five years to see if their perspectives have changed and to measure the tracking metrics listed above.

- Also assess the percentage of rental properties that have been verified to meet "base standards" or equivalent for the housing type every year depending on available resources.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Renter Preparedness Initiatives | |
|---|---|
| **Challenge RE-1:** Most renters lack authority to implement risk reduction measures. Rental owners and property management companies (by proxy) are ultimately responsible for reducing wildfire risk, but they don't appear to have incentive or motivation to take necessary action. | |
| RE-1.1 | Identify strategies to bring older rental units up to wildfire compliance standards for wildfire resistance and defensible space and to maintain those standards. |
| RE-1.2 | Develop the means to cover the cost of assessing wildfire risk for all rentals in Ashland. |
| RE-1.3 | Establish a sustainable program to assess wildfire risk on privately managed rentals, using IBHS Wildfire Prepared Home standards and random inspections. |
| RE-1.4 | Create a sustainable system to communicate with and assess wildfire risk at property-managed rental properties every five (5) years. |

| RE-1.5 | Secure funding, if necessary, to mitigate wildfire hazards and risks so that rental rates do not increase solely because of wildfire risk reduction activities. |
|---|---|
| RE-1.6 | Encourage property management companies to require annual wildfire training and certification for contracted landscaping providers, phased in over five (5) years. |
| RE-1.7 | Implement a city-approved wildfire-resistant homes certification program for property managers, with options for private rental owners and recertification every three (3) years. |
| **Challenge RE-2:** Renters living in multi-unit housing face greater challenges. Many renters don't understand wildfire risk or are not motivated to learn. | |
| RE-2.1 | Secure resources to sustain face-to-face engagement with renters and property owners, assess wildfire risk needs, and enhance renter education with a focus on evacuation, communication, and personal risk reduction for multi-family housing. |
| RE-2.2 | Develop and update a "risk reduction best practices" package customized by housing type; ask property managers and encourage rental owners to provide wildfire preparedness and renters insurance information in welcome packages and attached to leases. |
| RE-2.3 | Define lease agreement requirements for tenants to create and maintain defensible space in accordance with wildfire safety codes and ordinances. |

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| Challenge RE-3: In the aftermath of wildfire, the availability of affordable rental homes in Ashland may become severely limited, potentially forcing many residents to relocate. | |
|---|---|
| RE-3.1 | Collaborate with regional partners who participated in the drafting of the Rogue Reimagined project to articulate recommended actions and avenues for securing resources. |
| RE-3.2 | Create a partnership to pre-plan affordable housing rebuilding strategies (e.g., establishing a land trust like Breath of Life and Spirit Village) and the steps to make it happen. |
| RE-3.3 | In the Ashland Wildfire Recovery Plan, include a section on rebuilding affordable rental building stock. Identify the challenges and solutions based on experiences in other communities. |

*Table 13: Renter Preparedness Initiatives*

Section 7

# Preparedness for Socially Vulnerable Populations

# Section 7: Preparedness for Socially Vulnerable Populations

*"We lost just over 700 homes in our community, most of it affordable housing. It very succinctly ripped right through most of our naturally-occurring affordable housing."*

–Darby Ayers-Flood, Mayor of Talent (Castillo, E. 2025, OPB)

## Introduction

In this context, the definition of **Socially Vulnerable Populations (SVPs)** includes individuals who self-identify as living in a household where one or more of the following conditions exist: low income, housing insecurity, disability, senior status, single parenthood, and/or limited English proficiency.

This section examines wildfire home risk perception among Ashland's housed SVP, outlines the data collection process, summarizes key findings, and identifies challenges and initiatives aimed at enabling the **housed** SVP to have a home to return to when wildfires impact Ashland.

While guidance exists on aiding underserved groups in wildfire recovery, relatively little was found tailored to help SVPs have ignition-resistant homes before a wildfire. Most wildfire preparedness advice focuses on single-family homeowners, often overlooking socially vulnerable populations (SVPs), especially those living in multi-unit housing. To enable SVPs to have homes after a wildfire, it is crucial to assess their awareness of wildfire hazards in Ashland and the barriers they face to making their homes safer. With this understanding, the community can better engage these residents to help address their needs. To support this effort, the City of Ashland launched the SVP Project in 2024.

## Process

A working group of ten (10) members met bi-weekly from June to October 2024 to guide the "Enabling Socially Vulnerable Populations to Have Fire-Resistant Homes" Project and develop recommendations based on its findings. After finalizing interview questions, outreach began with door-to-door visits in target areas with high utilization of energy bill assistance and areas with an abundance of multi-family housing.

For these impromptu interviews, individuals shared wildfire concerns through small gatherings ("coffee klatches"), home interviews, and public space conversations, such as at the Ashland Senior Center. Two (2) experienced interviewers conducted 83% of the interviews, while the remaining interviews were completed by four (4) trained volunteers and twenty (20) Southern Oregon University (SOU) Sociology students.

A total of 225 1-on-1 interviews took place, and over 93% of participants were Ashland residents. Findings from these interviews were analyzed, and the full report and raw data can be found in the SVP Project Report in the appendices.

The primary intent of the SVP Project was to document what socially vulnerable people had to say about wildfire, specifically perceptions about the potential for their home to burn and what they thought would make their home safer. Related questions were about where they obtain information on wildfires and how to reduce wildfire hazards. Responses to questions about evacuation choices are covered in the Community Health and Safety section (Section 4).

A final open-ended interview question began with a general statement such as "this an opportunity to express yourself on any topic." Prompts by the interviewer varied based on the interviewee's willingness to share additional thoughts.

An organic conversation with no hint of authority was the goal of this process. No formal criteria were offered to help the respondents decide about social determinants. The interviewer did not define what it means to be a member of the targeted demographic groups; rather, they let the respondents decide. This means that the findings from the SVP Project do not represent the perspectives and experiences of the member populations as defined by the interviewers; they represent the

perspectives and experiences of the respondents as defined by the respondents. The process was pseudo-randomized and should not be considered statistically representative.

This informal approach emphasized establishing a trustworthy relationship with everyone who agreed to have a conversation with the interviewer. There was an assumption that interviewees might have experienced, or were experiencing, some sort of trauma, particularly related to wildfire. It was also assumed that some people would not be comfortable talking to an authority figure. Interviewers were advised to do specific things to avoid triggering negative reactions to the interviewer or the questions asked.

## Demographic Findings

Information in this section represents selected findings from the 2024 SVP Project. Additional information can be found in the full report in the appendices.
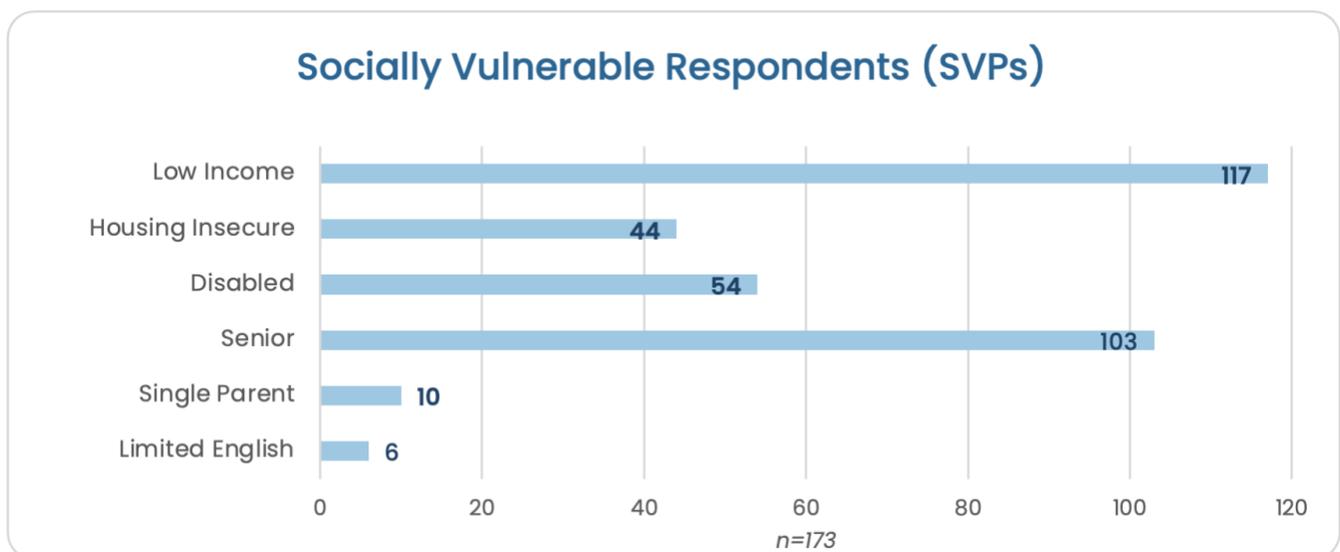


*Figure 25: Target Populations Represented*

Out of the 173 respondents who self-identified as being a part of one or more SVP groups, 117 identified as low-income, forty-four (44) identified as housing-insecure, fifty-four (54) identified as having a person with disabilities in their household, 103 identified as having a senior in their

household, six (6) identified as having individuals with limited English proficiency in their household, and ten (10) respondents identified as being a single parent (Figure 25).

## Respondent Housing

Most socially vulnerable populations live in older, low-income housing or manufactured homes, which typically have higher ignition potential due to combustible construction materials and lack of ignition-resistant design features (Reining et al., 2025). Lower-income residents lack financial and informational resources to make retrofits (Winker et al., 2024). Manufactured housing communities face severe wildfire risk due to poor insulation, lack of defensible space, and high housing density (Otto & Clifford, 2025).

Of all survey respondents, 25% lived in an older single-family home, 31% lived in an apartment building, 22% lived in a mobile or manufactured home park, and 19% lived in a condo, townhouse, duplex, or accessory dwelling unit (ADU). One person lived in a room in a house, and one lived in their car (Figure 26).
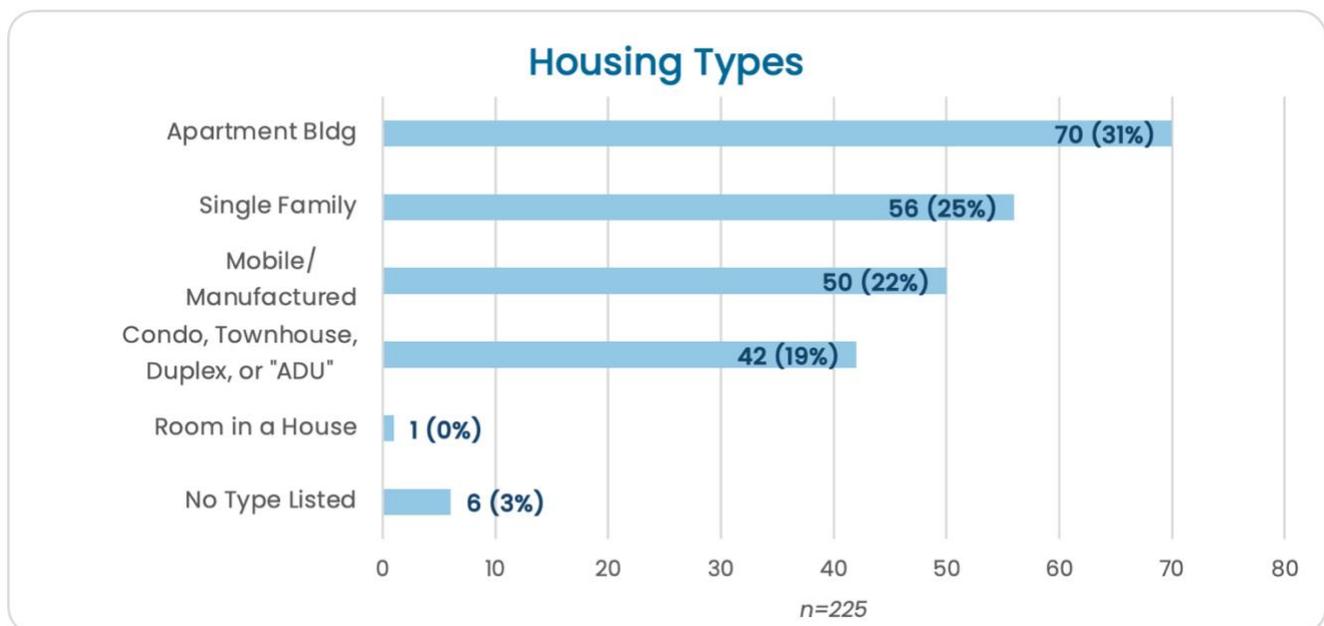


*Figure 26: Where the Sampled Population Lives*

Older apartments buildings were the most common type of housing, particularly for low-income individuals, housing-insecure respondents, and persons with disabilities. Most seniors live in mobile/manufactured homes or single-family homes. Single parents show an even split between apartments and single-family homes.

High-density, multi-family housing communities in Ashland, including apartments, mobile home parks, and multiplexes, where many socially vulnerable populations reside, face elevated wildfire risk due to aging structures that are more vulnerable to ignition and crowded developments.

## Respondent Evacuation Plans

Results are summarized in the Public Safety section and compared with a general population survey in. Additional information and raw data are available in the SVP Project Report in the appendices.

## Perceptions of Safety

Everyone interviewed was asked *"How safe from wildfires do you believe your home* is?". About 32% of the respondents said they "don't know or don't think about it much" and about 1% said they "don't care." The mid-range response "Kind of safe", was ~30%, which was the most popular answer after "I don't know." Just over 47% of the sampled population in the SVP Project feels some degree of "safe". Nearly 20% feel some degree of "unsafe." This data reveals a divide in perceptions, with some individuals expressing greater uncertainty and concern about their home's safety compared to others in the same demographic.

Interviewees were asked to explain their answers. Among those who felt "very safe," none provided strong evidence to support their belief. Their justifications revealed a limited understanding of what is required to make homes resistant to wildfire, often citing a sense of security because they live in the middle of town.

Respondents who described their homes as "safe" sometimes cited factors beyond their control, such as nearby fields, or expressed optimism because their homes hadn't burned yet. Some relied on the belief that Ashland Fire & Rescue (AF&R) would prevent wildfire from reaching their home. Overall, most respondents demonstrated significant gaps in knowledge about wildfire safety. Less

than half mentioned relevant factors, and many responses reflected misconceptions about what makes a home safe from wildfire.

Findings reveal widespread uncertainty and misconceptions about wildfire safety, with many respondents feeling "safe" based on factors beyond their control rather than proactive mitigation measures, highlighting significant gaps in knowledge and preparedness.

## Communication Modalities

A significant portion of SVP interviewees (35%) reported not receiving wildfire-related information or not knowing where to find it, with apartment dwellers being the most affected. The City of Ashland website, which was a top source for wealthier homeowners, was rarely mentioned (3.5%) by SVP respondents, indicating the possibility that traditional online communication strategies may not effectively reach socially vulnerable populations. Instead, nearly twice as many SVP respondents rely on social media or traditional media channels over official city or non-governmental sources. Additionally, 9.4% of SVP respondents turn to friends, family, or neighbors for information, and 5.4% rely on their landscaper or rental property owner for relevant information.

Direct engagement appears to be the most effective way to inform SVP residents, with ~16% of interviewees citing city staff or volunteers as key sources of information. Approximately 32% of respondents signed up for a future on-site risk assessment during the interview process.

Findings suggest that tailored, hands-on outreach efforts may be the most effective way to bridge wildfire preparedness gaps among socially vulnerable communities. However, it is evident that more research on a broader scale must be done in this area.

## Risk Reduction Barriers

Several risk reduction barriers were identified by respondents during this study. Figure 27 and the following paragraphs outline the most common barriers to residents making their homes safer from the threat of wildfire.

**Top 4 Risk Reduction Barriers to Making Homes Safer from Wildfires**

1. Lack of Agency

2. Financial Constraints

3. Inadequate Knowledge

4. Physical Limitations

*Figure 27: Top 4 Risk Reduction Barriers*

**Lack of agency** refers to the idea that respondents do not believe they have control over, or responsibility for, making their homes safer. Rather, they believe that responsibility or control rests in the hands of rental property owners or managers, mobile or manufactured home park owners or managers, or a Homeowners' Association (HOA). Households that most frequently identified lack of agency as a factor preventing them from having ignition-resistant residences were renters, single parents, and the housing-insecure.

*84% of renters felt like they had no control over their home's safety from wildfire.*

**Financial constraints** affect many SVP households. Approximately 29% of the 173 respondents indicated that finances limit their ability to make their home resistant to exposures from wildfire. About 13% indicate that they lack agency to reduce the risk themselves because they are renters or are constrained or dependent upon an HOA taking care of the property.

Financial constraints were a limiting factor for ~50% of households with a disabled resident, and ~40% of single-parent households. For low-income, housing insecure, and households with seniors and limited English-speaking individuals, approximately 33% of these households indicated that finances were a limiting factor as well.

*Inadequate knowledge* also plays a role for many socially vulnerable groups, as they are either underinformed, misinformed, disengaged, traumatized, or do not recognize wildfire as a threat to their home. Of households with a person with disabilities, low-income, housing insecure, and single-parent households, approximately 20% indicated that they *didn't know what to do to make their home safe from wildfire*. Similarly, approximately 33% of the limited English-speaking households and just over 10% of seniors said they also didn't really know what needs to be done.

*Physical limitations* create another barrier to effective wildfire preparedness. A small number, approximately 9%, of SVP respondents said they lack the physical capacity to do the work, even though most of these same individuals have agency to make these changes because they are homeowners.

> *Almost 1 in 5 residents are living below the federal poverty line and nearly 40% of Ashland households are deemed "cost burdened."*
>
> (ACCESS, 2023)

*Other barriers* were also identified, which included the following sentiments:

- I don't care.
- It's hopeless.
- I can't find help.
- It's not a priority.
- I don't have time.
- I don't think anything needs to be done.
- The problem is on neighboring properties.

All socially vulnerable groups face a variety of risk reduction barriers to making their residences safer from the threat of wildfire. These include limited agency to make changes, clear understanding about what needs to be done, insufficient financial resources, and physical limitations.

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# Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| SVP Preparedness Challenge Statements |
|---|
| **Challenge SV-1:** Many socially vulnerable households underestimate their wildfire risk and face multiple barriers to reducing that risk. |
| **Challenge SV-2:** SVPs require a variety of communication modalities to develop trusting relationships critical to fostering engagement. |
| **Challenge SV-3:** A majority of socially vulnerable residents live in housing that is highly vulnerable to wildfire ignition. |

*Figure 28: SVP Preparedness Challenge Statements*

## Baseline Conditions

- Percentage of SVPs by housing type, perceptions of relative safety, and perceived barriers to reducing risk as noted in the 2024 SVP Project results (see appendices).

## Desired Conditions

- SVPs are actively engaged in reducing their wildfire risk.
- Everyone has a residence to return to when wildfire occurs in Ashland.
- Within five (5) years, 50% or more of SVP housing units meet or exceed wildfire prepared property standards.

## Tracking Metrics

- Number of multi-family housing units that are compliant with Ashland "home-hardening" and "defensible space" codes & ordinances.

- Number of SVP households actively engaged in wildfire related issues.

## Monitoring Plan

- Randomly re-sample individuals from the SVP at least once every three to five (3-5) years to determine how perspectives have changed and to measure tracking metrics listed above.

- Where feasible, use onsite wildfire risk assessment data with follow up surveys, aerial imagery, or other tools to document mitigation actions taken that directly benefit socially vulnerable households.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| SVP Preparedness Initiatives | |
|---|---|
| **Challenge SV-1: Many socially vulnerable households underestimate their wildfire risk and face multiple barriers to reducing that risk.** | |
| SV-1.1 | Investigate which local organizations have a similar vision/mission relative to the needs of the SVPs and find opportunities to formally collaborate and develop MOUs as appropriate. |
| SV-1.2 | Find a champion to oversee implementation of SVP-specific initiatives. |
| SV-1.3 | Create a work plan to enable SVPs to address risk-reduction barriers. |
| SV-1.4 | Conduct face-to-face, engaging interviews with 200+ SVPs every 3-5 years. |

| **Challenge SV-2:** SVPs require a variety of communication modalities to develop trusting relationships critical to fostering engagement. | |
|---|---|
| SV-2.1 | Create a partnership capitalizing on existing networks and social service organizations to brainstorm and test multiple communication modalities to engage SVPs where they live and in other spaces as appropriate. Establish MOUs if necessary. |
| SV-2.2 | Invest in relationship building methods that work for specific target populations/individuals by collaboratively developing and implementing a 5-year work plan to test communication modalities. |
| SV-2.3 | Establish an "SVP Communications Fund" to explore and test communication modalities. |
| SV-2.4 | Deliver customized information that is readily accessible to those who have limited resources, are house-bound, or isolated. |
| SV-2.5 | If needed, figure out how to compensate partners who participate in the partnership development process. |
| **Challenge SV-3:** A majority of socially vulnerable residents live in housing that is highly vulnerable to wildfire ignition. | |
| SV-3.1 | Map where socially vulnerable residents live and systematically evaluate wildfire risk in those areas. |
| SV-3.2 | Pursue grant funding to provide socially vulnerable households with equipment and materials for healthy indoor air during wildfire events. |
| SV-3.3 | Establish a city-based revenue stream to continuously support wildfire risk reduction projects for socially vulnerable households. |

*Table 14: SVP Preparedness Initiatives*

Section 8

# Insurance Crisis

# Section 8: Insurance Crisis

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*"When we finally came back and saw all the devastation [we went into shock].
We had no power for weeks and no cell service. We lost all of the food in the
refrigerator because of the power outage. I don't think my parents had any
insurance to deal with the losses. Since insurance is for the home, they probably
had no way to get reimbursement for the time in the hotel. This is something that
needs to be addressed...."*

–Ashland Apartment Resident

---

# Introduction

## A Crisis is Forming

Insurance is critical for households recovering from wildfires and essential for securing a loan to
acquire real property.

*"Home, rental, and property-related insurance products are ubiquitous and foundational to the
health of the US housing market. Insurance functions like a glue that helps the housing finance
system stick together"* (Koller, 2025).

Unfortunately, the United States is experiencing an insurance crisis affecting homeowners,
businesses, and renters. This is primarily driven by escalating insurance premiums and reduced
availability of coverage, largely due to the increasing frequency and severity of climate-related
disasters (U.S. Senate Budget Committee, 2024; U.S. Department of the Treasury, 2025; Time, 2025).

Natural disasters are increasing insurance premiums and rebuilding costs due to their increasing
frequency and severity. As climate change intensifies storms, wildfires, and floods, insurers face
higher payouts, leading to rising premiums for homeowners and businesses (National Oceanic and
Atmospheric Administration [NOAA], 2023).

Key factors include inflation-driven rebuilding costs (Federal Emergency Management Agency [FEMA], 2023) and higher reinsurance expenses (S&P Global, 2023). These pressures create financial strain on policyholders, especially in disaster-prone areas.

On February 2, 2025, the First Street Foundation issued a report predicting a significant decline in U.S. real estate values due to rising climate change impacts, including wildfire. The average decline predicted in property values in "climate abandonment areas" is 6.2%; in "risky growth" areas the decline is projected to be 1.7% over the next 30 years.

*"We are marching steadily towards an uninsurable future in this country."*

-Dave Jones, former California insurance commissioner

Homeowners across the U.S. are facing rising insurance premiums, making homeownership increasingly costly. From 2020 to 2023, homeowners' insurance prices increased by approximately 20%, contributing to the growing financial burden on property owners (Prevention Web, 2024). In some high-risk areas, insurers have ceased offering coverage altogether, leaving homeowners with limited options (Insurance Information Institute, 2023). This situation has led to homeowners feeling "trapped" in properties they can barely afford, with some considering selling their homes due to the financial strain (The Guardian, 2025).

Despite state laws mandating fire coverage in homeowners' insurance policies, insurers can refuse renewals for high-risk properties (Baumhardt, 2024). Recent legislative efforts to encourage wildfire resilience through premium discounts have had minimal impact so far (Baumhardt, 2024; Senate Budget Committee, 2024).

## FAIR Plans

FAIR (Fair Access to Insurance Requirements) Plans are state-mandated insurance programs designed to provide basic property insurance to homeowners and businesses that cannot obtain coverage in the private market due to high wildfire risks or other hazards. Oregon has a FAIR Plan program (Oregon FAIR Plan Association, n.d.). These plans are typically considered a last resort, offering limited coverage at higher premiums compared to traditional policies.

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As wildfire becomes more frequent and severe, more homeowners and businesses are being forced into FAIR Plans, leading to concerns about affordability, coverage adequacy, and long-term sustainability (Mixides, 2025). While FAIR Plans help maintain a level of market stability, they do not incentivize risk reduction or provide comprehensive coverage options comparable to private insurers.

Nationwide, the number of FAIR Plan insurance policies nearly doubled between 2018 and 2023, rising to 2.7 million, according to data from AM Best, a company that rates the financial strength of insurers. The California FAIR Plan alone saw its exposure grow nine-fold over the past six (6) years (Time, 2025).

FAIR Plans serve as a temporary safety net, but their rising enrollment highlights a growing insurance crisis in wildfire-prone regions. Without systemic reforms, such as stronger risk reduction incentives and improved insurance models, reliance on FAIR Plans will continue to grow, making property coverage increasingly expensive and inaccessible (Mixides, 2025).

As wildfire risks intensify, homeowners and businesses in high-risk areas are increasingly forced into FAIR Plans, which offer limited, high-cost coverage without incentivizing risk reduction, highlighting the urgent need for insurance reform and stronger mitigation strategies.

## IBHS Wildfire Prepared Home Program

The IBHS Wildfire Prepared Home Program, developed by the Insurance Institute for Business & Home Safety (IBHS), provides science-based standards to help homeowners reduce wildfire risk and improve insurability. By implementing key mitigation measures—such as fire-resistant roofing, ember-resistant vents, defensible space, and ignition-resistant decks—homeowners can earn a Wildfire Prepared Home designation, demonstrating their commitment to risk reduction. This designation enhances home resilience and signals to insurers that a property meets rigorous wildfire safety standards, potentially improving access to coverage and reducing premium costs. By bridging scientific research, homeowner action, and insurance industry interests, the program supports the development of fire-adapted communities and a more sustainable insurance market in wildfire-prone areas. The IBHS Wildfire Prepared Home Program became available to single-family

homeowners in Oregon in October 2024, and Ashland is looking at ways to incorporate this program into its wildfire resiliency efforts.

# Local Findings

## Homeowners' Insurance

In 2015, 2019, and 2024, the City of Ashland supported quantitative and qualitative studies involving approximately 2,145 participants. The 2019 and 2024 studies asked homeowners and renters about their wildfire insurance coverage.

A 2024 Consumer Federation of America study reported that 7.4% of U.S. homeowners now lack insurance, up from 5% in 2019, largely due to affordability issues (Realtor.com, n.d.). Premiums have risen nationally ~20% between 2020-2023 alone (Steve Koller, 2024). Premiums increased by 23% in the past year, with major insurers like Allstate and State Farm halting new policies in California, citing wildfire risks and rising costs (Realtor.com, n.d.; Senate Budget Committee, 2024). For example, in July 2024, State Farm dropped nearly 70% of policyholders in Pacific Palisades, California, just six (6) months before whole neighborhoods were consumed by wildfire in January 2025 (Time, 2025).

Since 2018, Oregon homeowners' insurance premiums have risen 44.8%, with a sharp 16.5% increase in 2023 alone (Realty Today, 2025). In wildfire-prone areas like Ashland, Bend, and Medford, rates have doubled or quadrupled, with some Ashland residents facing hikes of up to 600% over four (4) years (Baumhardt, 2024).

Most Ashland homeowners that responded to the 2019 survey and the 2024 CWPP survey appear to have homeowner's insurance. For the 2019 survey, 12% percent of single-family homeowners living in high-risk areas of the city indicated that their insurance companies provided wildfire-related information, and only 2% received discounts for reducing wildfire risks.

Among homeowners in the 2024 Socially Vulnerable Populations (SVP) Project—many of whom live in mobile or manufactured home parks—11% reported being uninsured, which is higher than the national average of 7.4% and more than double the uninsured rate reported in the 2024 CWPP online general survey (5%). For these homeowners, high premiums and difficulty obtaining insurance were cited as the primary barriers to coverage.

Many Ashland homeowners are facing rising insurance premiums. While 56% of the respondents to the 2024 CWPP online general survey reported only minor or normal increases, nearly 29% said their premiums had risen sharply due to wildfire risks. An Ashland City Council member reported a staggering 700% increase in their insurance premium last year.

Even though most Ashland homeowners are currently insured, affordability and access to coverage are growing concerns, particularly for residents in high-risk areas like mobile/manufactured home parks and homes near wildlands. The ongoing insurance crisis could lead to increasing non-renewals and declining home values.

## Insurance for Renters and Socially Vulnerable

While renters are not directly responsible for property insurance, the increased costs borne by property owners will likely trickle down. When rental property owners facing higher insurance premiums pass these costs on to tenants through increased rent, it will make housing less affordable for renters.

Renters insurance premiums remained relatively stable from 2018-2022 due to lower risk exposure, costing an average of $254 annually in Oregon (Insurance Information Institute, 2023).

Estimates suggest that 28-67% of Ashland renters lack renters' insurance, with the higher percentage based on interviews with socially vulnerable populations (SVP) and the lower figure derived from an online survey of forty-two (42) renters in the general population.

Senior renters interviewed during the 2024 SVP Project were nearly three (3) times more likely to be uninsured than those in the 2024 CWPP survey population, likely due to income disparities and the SVP study's focus on low-income households. These discrepancies suggest that insurance coverage among Ashland renters varies widely, likely influenced by age, socioeconomic status, and housing type.

Ashland renters in the 2024 CWPP online general survey appear to have a higher rate of renters insurance coverage than the national average, however findings from the SVP project highlight significant gaps in coverage for seniors and limited income, housing-insecure, disabled, single parent, and limited English proficiency renters.

Rental type affects renters' insurance coverage. Based on the 2024 CWPP online general survey, renters living in apartments or studios, ADUs, or cottages are the least likely to carry renters' insurance. This trend is also reflected in the 2024 SVP interview data. Overall, renters in apartments are least likely to have insurance.

Estimates found that half of the city's renters (~25% of the city's population) occupy either multi-family housing units or mobile/manufactured homes, which are highly vulnerable to wildfire. Many of these rentals are managed by property management companies that do not require renters' insurance. Oregon law permits property owners to require their tenant to get renters insurance, but there are some restrictions based on median household income (Oregon Revised Statues § 90.222, n.d.).

Renters in low-income, multi-unit housing typically face barriers such as financial constraints, social exclusion, and limited knowledge or access to insurance options (Klampe, 2023; Fothergill & Peek, 2004).

There is a disparity in renters insurance coverage within the population in Ashland. Socially vulnerable households, who are more likely to be renters of multi-unit/family housing, are least prepared to recover from wildfire losses. In 2020, the Almeda Fire disproportionately affected socially vulnerable populations, including low-income residents and the elderly, worsening existing social and economic disparities (OWER Council, 2021; Leickly et al., 2023). It destroyed over 2,600 homes, displacing many families, driving up housing costs, and leaving many in temporary or overcrowded conditions (Hoyer, 2024). Approximately 8,500 people were displaced (Oregon Department of Land Conservation and Development, 2023).

Many socially vulnerable households in Ashland lack wildfire insurance, leaving them without financial resources for post-disaster recovery.

## Business Insurance

In 2021, the Ashland Chamber of Commerce found that there were approximately 2,241 businesses registered in Ashland. This figure is based on active business licenses in the city and reflects the multitude of small enterprises operating locally (Ashland Chamber of Commerce, 2021).

*Figure 29: Photo Courtesy of Ashland Fire & Rescue*

In recent years, businesses in Southern Oregon have experienced significant increases in insurance premiums due to heightened wildfire risks (Oregon Public Broadcasting, July 14, 2024). Escalating costs are attributed to a combination of factors, including the fact that insurance companies, facing substantial payouts from natural disasters, have adjusted their pricing models to manage the elevated risks associated with climate change (Oregon Public Broadcasting, July 18, 2024).

Despite regulatory efforts, the overall trend indicates that businesses in Southern Oregon are facing higher insurance costs as insurers reassess their exposure to wildfire-prone areas.

Businesses in Southern Oregon, including those in Ashland, face rising insurance premiums as insurers adjust pricing models in response to wildfire risks and climate change impacts. This situation underscores the importance of proactive risk mitigation by business owners and staying informed about policy changes to manage financial impacts on businesses.

## Housing Affordability

Housing affordability is a pressing issue in Ashland. According to the City's Housing Capacity Analysis, 41% of households are cost-burdened, spending more than 30% of their income on housing expenses. The median home price in Ashland is approximately $540,000; significantly higher than the national median of $416,100 as of 2023 (City of Ashland, 2021). This financial strain exacerbates housing insecurity, particularly for renters, who make up between 42-47% of Ashland's population.

Businesses involved in affordable housing development are significantly affected by the rising cost of insurance. In Texas, for example, insurance premiums for multifamily properties have surged by up to 300% since 2020. This sharp increase has resulted in a more than 20% decline in the production of affordable rental housing built with federal tax credits between 2021 and 2023. Developers are now forced to sell properties or reduce the number of new projects due to these prohibitive insurance costs (Houston Chronicle, 2025).

Reduced investment in affordable housing developments exacerbates the shortage of affordable rental units. Due to limited affordable housing, a significant loss of rental units to wildfire would severely impact Ashland's socioeconomic viability, businesses, essential services, and cultural institutions. Rebuilding will take years. This is on clear display in Talent and Phoenix, nearly five (5) years since the Almeda Fire destroyed many hundreds of affordable housing units.

Due to limited affordable housing stock, the loss of more than a few units to wildfire would severely impact the city's socioeconomic viability, businesses, essential services, and cultural institutions.

*"The risks of loss are rising through climate change, and insurers can't just wave a magic wand and make them go away."*

-Dave Jones, the Former Insurance Commissioner of California

Rebuilding will be expensive, and many workers will be forced to leave the area due to lack of affordable housing.

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# Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Insurance Crisis Challenge Statements |
| --- |
| **Challenge IN-1:** While most Ashland homeowners are insured, affordability and access to coverage are growing concerns, particularly for residents in high-risk areas like mobile home parks and homes near wildlands. |
| **Challenge IN-2:** The number of uninsured renters in Ashland is significant, which means that many could lose all assets and be unable to find affordable temporary housing if their rental unit burns. |
| **Challenge IN-3:** Many socially vulnerable residents are uninsured, leaving them financially unprotected and at risk of displacement when wildfire occurs. |
| **Challenge IN-4:** Rising insurance costs and wildfire risks threaten business stability, housing security, and Ashland's socioeconomic viability, with rebuilding efforts expected to take years. |

*Figure 30: Insurance Crisis Challenge Statements*

## Baseline Conditions

- From 2018 to 2023, Oregon experienced a 44.8% increase in homeowners insurance rates.
- 98% of Ashland single-family homeowners were insured when sampled in 2019.
- 89% of mobile/manufactured homeowners were insured when sampled in 2024.
- 28-67% of renters are uninsured based on 2024 data; socially vulnerable households are at the high end.

- There is no baseline information to quantify the adequacy of business insurance coverage in Ashland.

## Desired Conditions

- 100% of residential units, renters and businesses have affordable wildfire loss insurance to cover evacuation expenses, temporary housing, and the loss of personal and real assets.

## Tracking Metrics

- Number of homeowners, renters, and businesses with comprehensive and basic wildfire insurance coverage.

- The average premium rate change by housing/business type and demographic group.

## Monitoring Plan

- Randomly sample homeowners, renters, and business owners every 3-5 year

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Insurance Crisis Initiatives | |
|---|---|
| **Challenge IN-1:** While most Ashland homeowners are insured, affordability and access to coverage are growing concerns, particularly for residents in high-risk areas like mobile home parks and homes near wildlands. | |
| IN-1.1 | Promote the IBHS Wildfire Prepared Homes Program to single-family homeowners. |
| IN-1.2 | Create a taskforce to develop sustainable, accessible insurance options for all housing types. |

| IN-1.3 | Collaborate with insurers to educate the public on wildfire coverage challenges and solutions. |
|---|---|
| IN-1.4 | Work with elected officials to align insurance premiums with location-based mitigation efforts. |
| IN-1.5 | Develop a handout to guide residents on wildfire insurance coverage, including covering evacuation costs. |
| **Challenge IN-2:** The number of uninsured renters in Ashland is significant, which means that many could lose all assets and be unable to find affordable temporary housing if their rental unit burns. | |
| IN-2.1 | Create a taskforce to develop sustainable, accessible insurance options for renters. |
| IN-2.2 | Educate renters on wildfire insurance coverage and policy language to protect assets and survival needs. |
| IN-2.3 | Create standardized lease language encouraging or requiring tenants to get renters insurance. |
| IN-2.4 | Distribute information to renters about temporary housing insurance costs and options during evacuations or disasters. |
| **Challenge IN-3:** Many socially vulnerable residents are uninsured, leaving them financially unprotected and at risk of displacement when wildfire occurs. | |
| IN-3.1 | Create a taskforce to collaborate with the insurance industry and develop educational materials tailored to the needs of socially vulnerable populations (SVPs). |
| IN-3.2 | Establish pathways to help those who cannot afford insurance obtain coverage for temporary housing, lost wages, and asset protection. |

| IN-3.3 | Distribute educational materials and engage with SVPs using accessible methods, regardless of homeownership or insurance status. |
|---|---|
| IN-3.4 | Develop additional activities based on lessons learned from the Almeda Fire. |
| **Challenge IN-4:** Rising insurance costs and wildfire risks threaten business stability, housing security, and Ashland's socioeconomic viability, with rebuilding efforts expected to take years. | |
| IN-4.1 | The Chamber of Commerce will comprehensively assess and broadly strengthen business insurance coverage. |
| IN-4.2 | Collaborate with the insurance industry to develop strategies for sustained and affordable business coverage. |
| IN-4.3 | Explore creating business insurance pools for wildfire resilience & recovery. |

*Table 15: Insurance Crisis Initiatives*



*Figure 31: Wood Shake Roof, Photo Courtesy of Charisse Sydoriak*

2025 Ashland Community Wildfire Protection Plan

# The Wildfire Insurance Crisis

Home insurance in areas with high wildfire risk is becoming more expensive and harder to obtain, with potential consequences for state and local budgets.

**Wildfires contribute to more costly insurance**
The rising costs of wildfire recovery and rebuilding are among the reasons home insurers are raising rates, issuing non-renewals, and exiting risky locations.

**High insurance costs lead to underinsured homes**
In some western states, insurance has increased more than 50% in the last five years. A growing number of homeowners are underinsured or uninsured.

**The underinsured struggle to recover from disasters**
After wildfires, uninsured and underinsured households lack the resources to rebuild, extending the period of displacement.

**Without insurance, home financing is unavailable**
Inadequate insurance leads lenders to deny mortgage applications, reducing home ownership and impacting property values.

**Inaction raises costs for local and state budgets**
- Delays in rebuilding increase the demand for temporary housing and social services, adding billions to recovery costs.
- Declines in home values reduce local services such as police, schools, and street maintenance that rely on property tax revenue.
- The need for revenues increases the frequency of emergency allocations, unplanned tax increase and may threaten bond ratings.

## What needs to happen:
# Reduce community risk

Investing in community-scale wildfire-resisant construction, vegetation management, and neighborhood planning can minimize damages from wildfire and improve the accessibility and affordability of insurance.

*Figure 32: Wildfire Insurance Crisis Infographic*

# Economic Stability

# Section 9: Economic Stability

## Introduction

This chapter outlines strategies to help Ashland business owners, employees, and customers stay safe, while enabling businesses to serve the community and maintain economic stability during smoke events and before, during, and after wildfires.

Ashland's economy thrives on tourism, independent businesses, renowned institutions, and its unique sense of place. Home to the Oregon Shakespeare Festival and Southern Oregon University, it attracts year-round visitors for its rich culture and outdoor activities, from hiking and rafting to winter sports at Mt. Ashland.

*"Wildfires and smoke are becoming a more serious threat each year, and it's clear that Ashland and our region need to take action now. By working together on prevention, smoke mitigation, and emergency preparedness, we can continue to protect our community and build a stronger, more resilient future."*

-Greg White, Owner Reinholdt & O'Harra Insurance and Ashland Chamber of Commerce Board President/Emergency Preparedness Committee Chair

Ashland's charming, walkable downtown is the heart of the city's economy, drawing the highest concentration of visitors and employees within a five-block area filled with boutique shops, a vibrant culinary and wine scene, and wellness offerings. Lithia Park—designed in 1908 by John McLaren—enhances the town's appeal with nearly 100 acres of gardens, ponds, trails, a bandshell, the historic Butler-Perozzi Fountain, a Japanese Garden, and pickleball courts.

Ashland's rich history shines through its many historic homes and businesses, with several listed on the National Register of Historic Places. Its vibrant public art scene and performing arts venues attract visitors from the West Coast and beyond. Recently, *Architectural Digest* named Ashland one

of the "13 Most Beautiful Underrated Cities in the World," *TheTravel.com* dubbed it "America's Coziest College Town," and *USA Today* ranked the Winchester Inn as the #1 Bed & Breakfast in the nation.

## Process

The Ashland Chamber of Commerce was charged with answering two questions: (1) are Ashland businesses and their employees prepared for a wildfire emergency, and (2) what needs to be done, and by whom, to motivate action?

The Chamber of Commerce's Emergency Preparedness Committee has been collaborating with Ashland Fire & Rescue for a decade to develop wildfire preparedness education programs and messaging for the business community. In 2024, this committee pivoted to develop goals and objectives to answer these questions through a more comprehensive planning process. The challenges and initiatives the plan needs to address are described next.

## Effect of Wildfire on Businesses

Wildfire smoke negatively impacts Ashland's economy, particularly the tourism sector. A 2013 study estimated that local tourism businesses lost about $171,350 in a single month due to smoke-related disruptions (Sumic, et al., 2013). In 2017, these impacts were substantial, with the Oregon Shakespeare Festival (OSF) experiencing considerable financial losses and operational challenges. That season, OSF canceled nine (9) performances due to poor air quality, resulting in a $370,000 loss, with ripple effects on the local economy, as 85% of OSF's patrons are tourists (Oregon Forest Resources Institute, n.d.). The situation worsened in 2018, when OSF canceled more performances and relocated shows indoors, leading to an estimated $2 million in losses. In response, OSF considered major modifications to its outdoor theater, including a retractable roof and redesigned seating, to reduce future cancellations and improve the audience experience (Yuen, 2019).

Beyond OSF, persistent smoke has deterred people from visiting the area, reducing revenue for hotels, restaurants, and retailers. The Ashland Chamber of Commerce reported that prolonged smoke events led to widespread trip cancellations, further straining the local economy (Federal Reserve Bank of San Francisco, 2023). Additionally, residents and businesses faced increased costs to mitigate smoke exposure, such as purchasing air purifiers and upgrading HVAC systems, adding financial pressure to the community (University of Oregon, n.d.).

A recurring threat of wildfire smoke has created ongoing economic challenges for Ashland, impacting key industries like tourism and affecting the financial well-being of businesses and residents.

In 2020, the Almeda Fire, which began in Ashland, devastated the economies of nearby Talent and Phoenix, burning over 3,000 acres and damaging approximately 2,500 homes and hundreds of businesses (Rogue Valley Council of Governments, n.d.). This destruction caused immediate economic challenges, including job loss, reduced income, and increased housing insecurity. The loss of key businesses, including restaurants, shops, and grocery stores, left many unemployed and disrupted essential services, making recovery difficult for neighboring communities.

The fire also severely impacted the tax base for Talent and Phoenix. Loss of properties reduced taxable assets, decreasing property tax revenues and straining local government budgets. In response, the state introduced measures to balance property owner relief with the financial needs of municipalities, underscoring the disaster's broader economic effects.

Severe wildfires in urban areas destroy infrastructure, homes, and businesses, weakening the local economy and tax base. Recovery requires sustained efforts to rebuild physical structures and restore economic stability. In the aftermath, businesses face damages, supply chain disruptions, and lost customers, while municipalities struggle with reduced revenue from a decreased tax base and recovery efforts. A key factor in economic stability is ensuring businesses are prepared for major disasters and have the resources needed to recover and survive. The process for accessing these resources will vary depending on the stage of response or recovery.

## Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Economic Stability Challenge Statements |
|---|
| **Challenge ES-1:** Wildfire smoke is a recurring issue that continues to adversely impact the Ashland economy. |
| **Challenge ES-2:** A significant wildfire would devastate Ashland's economy, with long-lasting impacts that could cripple its economic stability for decades. |
| **Challenge ES-3:** Most businesses are not doing enough to protect their structures from exposure to wildfire. |

*Figure 33: Economic Stability Challenge Statements*

## Baseline Conditions

- There is no baseline data on how many businesses are prepared for the impact of wildfire on their operations, employees, or customers.
- Ashland businesses can access an online "Emergency Preparedness and Resilience Toolkit," created collaboratively between the City of Ashland and the Ashland Chamber of Commerce. This toolkit offers practical guidance and resources on key preparedness steps, including evacuation planning, asset inventory, safeguarding important documents, and ensuring adequate insurance coverage.

## Desired Conditions

- There is no loss of life.
- Residents and visitors can access what they need from local businesses.
- Local businesses are not displaced.
- No businesses are damaged or lost and economic impacts are minimal when smoke and/or wildfire impacts all or a portion of the city.
- All businesses, including home-based ones, have a plan for emergency preparedness, operations during a crisis, and post-disaster recovery, tailored to their specific needs.

## Tracking Metrics

- Economic impacts of smoke on Ashland businesses by business type.

- Economic impacts of wildfires on businesses when wildfires occur in or near Ashland.

- Number (and type) of businesses who have experienced insurance issues since 2020.

- Number (and type) of businesses that have had a wildfire risk assessment of their real property.

- Number (and type) of business that have measurably reduced identified wildfire risks on their real and personal property.

- Number (and type) of businesses that have a wildfire evacuation plan that they have practiced, an emergency operations plan or a business resumption plan for a disaster, as appropriate.

- Number of partners/partnerships working collectively to reduce wildfire risk community wide.

## Monitoring Plan

- Survey Ashland Businesses every other year to collect the equivalent data.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Economic Stability Initiatives | |
|---|---|
| **Challenge ES-1:** **Wildfire smoke is a recurring issue that continues to adversely impact the Ashland economy.** | |
| ES-1.1 | Measure and quantify smoke impacts on businesses and visitors. |
| ES-1.2 | Survey businesses about their smoke resilience efforts. |

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| | |
|---|---|
| ES-1.3 | Enable employees and visitors to be informed and remain healthy when air quality is poor. |
| ES-1.4 | Update the SmokeWise Ashland website. |
| ES-1.5 | Update the Business Preparedness Workbook with smoke strategies. |
| ES-1.6 | Promote smoke-adapted facility upgrades for businesses. |
| **Challenge ES-2:** A significant wildfire would devastate Ashland's economy, with long-lasting impacts that could cripple its economic stability for decades. | |
| ES-2.1 | Map critical business assets and major employment centers to identify areas with the highest concentrations of people. |
| ES-2.2 | Assess the readiness of business facilities, staff, and customers for wildfire emergencies. |
| ES-2.3 | Evaluate awareness and implementation of evacuation protocols, especially in visitor related businesses (lodging, dining, attractions). |
| ES-2.4 | Create industry-specific wildfire protocols and evacuation plans, including zone awareness for staff and customers. |
| ES-2.5 | Enhance business communication strategies for wildfire emergencies. |
| ES-2.6 | Update and expand the Chamber of Commerce preparedness toolkits and videos. |
| ES-2.7 | Host bi-annual wildfire preparedness workshops for businesses. |
| ES-2.8 | Integrate wildfire resources into new Chamber of Commerce member packets. |
| ES-2.9 | Provide outreach for employers, employees, and patrons with access needs. |

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| ES-2.10 | Collaborate with community partners to enhance existing programs and develop new initiatives. |
|---|---|
| ES-2.11 | Create a visitor-focused wildfire emergency plan for downtown. |
| ES-2.12 | Support resilience hubs to inform visitors and citizens. |
| ES-2.13 | Partner with recreation organizations to inform visitors during wildfires. |
| **Challenge ES-3:** Most businesses are not doing enough to protect their structures from exposure to wildfire. | |
| ES-3.1 | Work with the Ashland Chamber to help businesses understand structural vulnerabilities. |
| ES-3.2 | Collect baseline structural vulnerability data for Ashland businesses. |
| ES-3.3 | Support business structure hardening and defensible space initiatives. |
| ES-3.4 | Track progress on structural risk reduction and publicly highlight accomplishments. |

*Table 16: Economic Stability Initiatives*

2025 Ashland Community Wildfire Protection Plan

*Figure 34: Main St. in Ashland, Photo Courtesy of RG*

Section 10

# A Necessary Paradigm Shift

# Section 10: A Necessary Paradigm Shift

*"Mitigation measures on the structure (hardening) combined with removal of surrounding fuels in the area immediately adjacent to the structure (zone 0) has the potential to dramatically reduce losses in future fires. While applying these measures to any structure within a dense urban area makes little difference on the survivability of a single home, significant reductions in losses are achievable when community-wide actions can be applied."*

(Zamanialaei et al, 2023)

## Introduction

The initiatives in this chapter, if embraced fully, have the potential to save Ashland from a catastrophic wildfire disaster. Community destruction has become so commonplace that researchers have been able to learn key insights from catastrophic fires that others can reliably use to help avoid future losses.

Achieving meaningful, city-wide wildfire risk reduction will require a fundamental shift in how the community perceives this threat and a commitment to addressing the greatest risk the community has ever faced.

To become a fire-adapted community, Ashland would need to reduce wildfire exposure and harden about 90% of its structures and maintain this standard moving forward. If this standard is met, wildfires may occur in and around Ashland without necessarily triggering an urban conflagration – the widespread destruction of the built environment initiated by a wildfire. Relying on education, through flyers, lectures, and online resources, and relying on voluntary compliance among single-family homes is important, but not enough. Climate-driven extremes in fire behavior and weather are only intensifying, and experience from thousands of burned structures in dozens of communities points to the need for aggressive and timely risk reduction.

Most structures in Ashland weren't designed to withstand ember storms or the intense heat of city blocks burning under 40–60 mph winds. Additionally, traditional landscaping practices have left Ashland more vulnerable, with continuous, highly combustible vegetation, as well as wood and bark mulch dominating yards and public spaces.

World-renowned fire researcher Jack Cohen and others have said "We have the tools and knowledge to reduce community wildfire risks. But we must address the profound and deeply rooted misalignment of political and social expectations regarding what it means to live with wildfire. Now is the time to invest in long-term, economically efficient solutions, rather than short-term, risk-averse tactics. We have to live with wildland fire. We don't have to live with fire in our communities." (Calkin, et. al, 2023).

## Voluntary Verses Mandatory Risk Reduction Findings

Over the past 20 years, Ashland has invested significant effort in community wildfire risk reduction. Successful initiatives include the Ashland Forest Resiliency (AFR) Project, which has effectively reduced (but not eliminated) wildfire risk in the surrounding forests; a highly popular Firewise USA® program; various grant-funded homeowner incentive programs; and hiring of a Fire Adapted Communities Coordinator, who has led residential education and mitigation efforts. A volunteer-driven Wildfire Risk Assessment Program (WRAP) was particularly effective for two (2) years, increasing face-to-face engagement and motivating many residents, particularly homeowners, to act. Additionally, the Ashland Community Emergency Response Team (CERT) volunteer program has trained over 1,500 volunteers for disaster response and preparedness.

Most public outreach efforts prescribed in the 2004 CWPP, such as creating and distributing education materials and posting information on the city website, raised awareness in some demographic groups, but ultimately resulted in limited action. The Firewise USA® site certification program initially gained traction but has been deemed inadequate due to low performance requirements, lack of enforcement, and the program required an unsustainable amount of city fire department oversight. City of Ashland staff turnover in the Fire Adapted Communities Coordinator position has been high, due largely to workload demand exceeding available funding and resources. Thanks to two (2) decades of overcoming challenges, testing approaches, and building community

awareness, Ashland now has the informed experience needed to propose the necessary compulsory actions outlined in this section of the CWPP.

While voluntary measures have reduced risk, their effectiveness is constrained by the limited value of simple messaging, limited volunteer participation, physical and financial barriers, and heavy reliance on limited city staff for ongoing outreach and education.

Voluntary compliance with wildfire home hardening and defensible space standards has shown mixed effectiveness, as evidenced by various studies and reports (Pavaglio et al., 2021; Edgeley, et al., 2020; Crow, et al., 2015; McCaffrey et al. (2011); Vogt and McCaffrey, 2011).

In a study examining community policies and defensible space compliance, McCaffrey et al. (2011) found that while there are concerns about regulations infringing on personal liberties, mandatory approaches may be justified in high-risk areas or when individual noncompliance poses risks to neighbors. Participants acknowledged that, under certain conditions, regulations could be appropriate to enhance community safety.

Other research indicates that effective wildfire hazard mitigation programs can incorporate voluntary and mandatory elements. Homeowners are more likely to accept mandatory programs if they perceive a significant risk and believe that such regulations serve the common good (McCaffrey, S.M., 2004; Winter, G, et.al, 2009).

A program evaluation of the Town of Woodside, and of the Plumas County Fire Safe Council, found that defensible space requirements are often unrealistic without proper financial assistance, suggesting that homeowners may struggle to implement these measures without support (San Jose State University, 2021).

In their 2021 study, Baylis and Boomhower analyzed the effectiveness of California's mandatory wildfire building codes compared to voluntary adaptation measures. Utilizing administrative data on housing damage and assessments, they found that homes constructed under these codes are approximately 40% less likely to be destroyed in wildfires. Additionally, these building codes provide protective benefits to neighboring structures. The authors concluded that mandatory building standards yield significant net social benefits in wildfire-prone areas.

On September 8, 2020, the Almeda Fire started in Ashland, moving rapidly into adjacent communities with devastating consequences. A slight change in the ignition point or wind direction could have destroyed much of Ashland. The January 2025 Eaton Fire was a surprise to many that lived in Altadena, CA, which is a densely populated, mixed residential area not that different from Ashland. Researchers have investigated whether such events change risk perceptions and promote behavior or policy change. They found in one study that "direct experience with wildfire does not directly influence the risk perception–risk mitigation process" (Martin, et al., 2009). Another study into whether recent wildfire experience "opens a 'window of opportunity' leading to local government policy changes" found that "land use planning and regulations remained largely unchanged." They found that "[l]ocations with long histories of destructive wildfire, extensive previous investment in formal wildfire regulation and mitigation, or little government and community capacity to manage wildfire saw fewer changes" (Mockrin, et al., 2017). They also reported that across diverse settings, communities consistently shy away from "incorporating formal approaches." They implied that the solution lay in a combination of receiving external funding, having sufficient capacity, and the presence of "issue champions."

Voluntary wildfire risk reduction measures have mixed success, influenced by perceived risk, financial support, and community engagement. Voluntary compliance relies on the hope that homeowners will do their part. This hope has not led to large-scale results in Ashland over the past fifteen (15) years, and results are desperately needed to protect the city, and its residents, businesses, and visitors from the threat that catastrophic wildfires pose. ***Hope is not a strategy.*** Research suggests that combining voluntary and mandatory strategies is the most effective approach. While building codes and defensible space regulations offer clear benefits, their adoption remains limited in most places due to concerns about personal freedoms and local capacity. Regulatory measures have been shown to have significant benefits for the homeowner, their neighbors, and the entire community.

## Risk Reduction Incentives Experience

In April 2021, the Federal Emergency Management Agency (FEMA) awarded a $3 million Pre-Disaster Mitigation grant to the City of Ashland aimed at enhancing wildfire resilience. The project targeted the creation of defensible space around 1,100 homes and the replacement of twenty-three (23)

wood shake roofs with ignition-resistant roofing materials. While the roof replacement program worked well, the defensible space improvement incentive program has proven challenging to administer. In addition, the voluntary participation rate leading to completion of defensible space has been low at 30% (169/562 contacts as of January 2025).

At the current pace, if every property owner voluntarily cooperated, though improbable, it would take 45 years and an estimated $14 million more to complete defensible space work as outlined under the FEMA Grant for the remaining structures in Ashland. Landscaping changes are only half of the wildfire mitigation equation. Home hardening will cost more to achieve, but it is equally important.

At one point, Ashland had thirty-five (35) active and sanctioned Firewise USA® neighborhoods, which has now dwindled to seventeen (17) due to staffing challenges and to lack of citizen participation and leadership. The lack of enforcement, no verification of standards at each property, and lack of "critical mass" participating at each neighborhood led the city to conclude that Firewise USA® was insufficient to protect Ashland from future wildfires. Complaints to Fire Department staff were common from homeowners who met the voluntary standards and still felt vulnerable because of their neighbor's lack of action. This is supported by the CWPP public survey results that showed 32.3% of respondents said their neighbor was the biggest obstacle to achieving wildfire-readiness.

In other communities, incentive-based programs have been implemented to encourage individuals and communities to adopt wildfire risk mitigation measures. These incentives include insurance discounts, cost-sharing initiatives, and tax adjustments. Research indicates that such incentives can effectively motivate property owners to engage in risk-reducing behaviors, especially when combined with educational outreach. However, the success of these programs often depends on factors like the adequacy of the incentives, the level of public awareness, and the accessibility of resources needed for implementation.

Meldrum, et al, conducted a study in California's wildland-urban interface areas utilizing a choice experiment to assess homeowners' willingness to invest in public and private fuel reduction programs. The findings indicated that homeowners residing in perceived high-risk areas are inclined to financially support new wildfire risk mitigation initiatives. The study revealed that homeowners with lower income and education levels are less responsive to risk factors and generally prefer maintaining the status quo over incurring costs for new mitigation programs. This suggests that such homeowners may require accessible information and substantial financial incentives to engage in risk reduction efforts.

*"When aligned with regulatory tools such as ordinances and building codes, incentive-based programs reaffirm a community's commitment to becoming fire-adapted."*

(Barrett, K. 2019)

A 2023 analysis by Headwaters Economics and the Columbia Climate School evaluated various policies aimed at reducing community wildfire risk. The study concluded that managing the built environment through strategies like mandatory building codes and home hardening are among the most effective approaches. However, these strategies often receive limited funding and support. The analysis emphasizes the need for increased investment in home-hardening programs and the implementation of mandatory building codes in wildfire-prone areas to enhance community resilience.

Incentives can promote wildfire risk reduction but often face low participation and are administratively burdensome. Financial support and education are crucial for broader engagement, especially among lower-income homeowners. Research suggests mandatory building codes and home hardening are most effective at reducing risk, but underfunded. Aligning incentives with regulations can enhance community resistance to wildfire damage.

## Critical Mass

As of 2020, Ashland is home to approximately 21,400 residents within 6.64 square miles, creating a population density of 3,218 people per square mile, which is over 350% higher than the national average of ninety-one (91) people per square mile (U.S. Census Bureau, n.d.).

In such a close-knit community, wildfire resilience depends on everyone doing their part. Many homeowners who have worked hard to reduce their wildfire risk express frustration that their neighbors aren't taking the same precautions (USDA Forest Service, 2020). They wonder why they should invest time and effort if those around them don't. It's a fair concern because wildfire risk isn't just personal, it's shared.

True protection comes when an entire community acts together. In the context of wildfire risk reduction in urban areas, the concept of "herd immunity" can be analogously applied through community-wide mitigation efforts. When a critical mass of properties within a community adopts fire-resistant measures, the collective resistance increases, thereby reducing the overall risk of wildfire spread and impact. Key strategies to achieve this communal protection include all the following:

- **Community-Wide Home Hardening:** Requiring all homeowners to implement a minimum level of ignition-resistant building materials and designs can significantly reduce structural ignitability. During new construction, **up-to-date**, well-enforced building codes ensure that new construction incorporates more extensive safety features, contributing to the community's overall defenses against wildfire (Insurance Institute of Business & Home Safety, n.d.).

- **Defensible Space Creation:** Collective efforts to maintain defensible space around properties can impede wildfire progression. This involves the removal of flammable vegetation and the strategic management of landscaping to create buffer zones, thereby enhancing the community's ability to withstand wildfire events.

- **Integrated Land Use Planning:** Incorporating wildfire risk considerations into urban planning helps prevent or slow expansion into more vulnerable areas. Policies that discourage low-density urban sprawl and limit growth into wildlands should be considered, along with requirements for developers to hire a qualified "special expert," or experienced Certified Wildfire Mitigation Specialist (CWMS), to write a detailed Wildfire Safety Plan for all new developments. By designing communities with wildfire resilience in mind, the overall susceptibility to wildfires is reduced (C40 Knowledge Hub. (n.d.).

- **Community Engagement and Education:** Empowering residents with knowledge and resources fosters a culture of preparedness. Community engagement initiatives encourage

proactive measures, such as participation in local fire prevention and preparedness programs and adherence to safety practices, thereby enhancing communal resistance.

- **Collaborative Mitigation:** By collaborating across multiple scales, through cooperatives, collectives, partnerships, businesses, multi-family housing, neighborhoods, networks, clubs, committees, schools, faith groups, volunteer organizations, and more, communities can strengthen their collective capacity to withstand wildfire challenges together.

By adopting community-wide measures and using wildfire mitigation best practices and tools (Coalitions and Collaboratives, n.d.), urban areas can emulate the protective benefits of herd immunity, creating an environment where the spread and impact of wildfires are significantly minimized.

> *The goal is to achieve meaningful wildfire risk reduction in 10 years. This requires strategically mitigating risk on ~90% of structures in the city.*

## Resident Support for Urgent Action

Most Ashland residents believe immediate action is necessary to address wildfire risks. According to the 2024 CWPP online general survey, 77% of respondents indicated that action is needed "as quickly as possible," showing strong consensus on the urgency of wildfire risk reduction efforts. Only 8% felt that there is sufficient time to act, and 5% believed that current efforts are adequate and nothing more needs to change. Just one respondent opposed any action.

The thirty-two (32) "other" responses to the "urgency question" reinforced the need for proactive and sustained efforts to address wildfire risks. Key themes from these responses emphasize reducing overgrowth, consistent vegetation management, and providing centralized access to resources and information. Residents also noted the importance of balancing cost with effectiveness, improving evacuation routes, and tailoring solutions to specific areas, particularly near the forested interface.

Ashland residents overwhelmingly recognize the urgency of wildfire risk reduction and advocate for immediate, proactive action, with a balanced approach.

## Summary

Based on the findings articulated in this section, Ashland must break away from business as usual and **embrace a paradigm shift** in its approach to wildfire risk reduction, moving from reactive response and individual voluntary efforts, to proactive, accountable, and collective actions that prioritize long-term resilience and shared responsibility.

The challenge statements that follow are obstacles to overcome to significantly **"move the needle"** on Ashland's wildfire risk reduction efforts. Over the next decade, the City of Ashland proposes implementing a scalable wildfire risk reduction strategy that combines mandatory home hardening, defensible space regulations, physical assistance, and financial incentives, ensuring 90% compliance across all parcels. Success depends on collaboration and commitment.

A paradigm shift cannot be accomplished solely with existing city staff and resources; rather this is a community problem that requires the whole community to rectify. City government, all major institutions, the business community, property managers and real estate professionals, as well as many other partners, must work together in a new business model.

Ashland needs a strategic approach designed with the best fire science and research, and support from a multitude of community leaders and partners. This new strategy must attain verifiable results that first responders can rely on during a wildfire emergency.

## Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Paradigm Shift Challenge Statements |
|---|
| **Challenge PS-1:** Protecting the city from wildfire requires a fundamental shift in how community leaders and citizens collectively perceive and respond to the risk. |
| **Challenge PS-2:** Existing wildfire mitigation efforts suffer from inconsistent and inadequate funding, making it difficult to support everyone. |
| **Challenge PS-3:** Voluntary compliance has proven insufficient, leaving the community dangerously exposed to wildfire. Alternative strategies are needed to accelerate risk reduction efforts. |

*Figure 35: Paradigm Shift Challenge Statements*

## Baseline Conditions

- Data was collected on a parcel-by-parcel basis for mostly single-family homes in 2018; it was not collected for the purpose of an absolute sense of wildfire preparedness. Rather, the 2018 risk baseline and the baseline in this document can only be classified as relative rankings for establishing priorities and strategies. Ultimately, a combination of relative risk assessment data along with on-site, explicit inspection and reinspection results will be able to establish whether a particular property meets scientifically acceptable standards of wildfire safety, and the degree of risk reduction accomplished.

## Desired Conditions

- When Ashland experiences wildfire under severe weather conditions, there is less than 10% loss of exposed structures, minimal disruption to the economy, and no loss of life.

## Tracking Metrics

- Percent by structure and type of structures meeting the equivalent standards of either the Wildfire Prepared Home base level, NIST Hazard Mitigation Methodology (HMM), or International Code Council's (ICC) International Wildland Urban Interface Code (IWUIC).

- Community risk can be tracked by cataloging changes in overall ladder fuel levels, aggregated neighborhood and community exposure to wildland fires, the extent of hazardous vegetation, and areas of dense construction.

- Additional metrics include the cumulative number of structures with adequate defensible space and home hardening improvements.

## Monitoring Plan

- Community-level and parcel-level wildfire risk monitoring should be systematically implemented.

- At the parcel level, risk data should be verified through site visits, with changes documented in assessment software based on completed mitigation activities.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Paradigm Shift Initiatives | |
|---|---|
| **Challenge PS-1:** Protecting the city from wildfire requires a fundamental shift in how community leaders and citizens collectively perceive and respond to the risk. | |
| PS-1.1 | Maintain wildfire risk reduction as the city's top priority for the next 5-10 years. |
| PS-1.2 | Implement policy and budget adjustments to support wildfire risk reduction for all property types in Ashland. |

| | |
|---|---|
| PS-1.3 | Host a potential partners forum in 2025 to investigate which local organizations have a similar vision/mission and determine whether it is in all parties' best interest to formally collaborate. |
| PS-1.4 | Create an organizational structure to fulfill initiatives based on existing and needed capacity. |
| PS-1.5 | If a suitable entity does not exist, establish one or more formal organizations (either a fiscally sponsored NGO, or through an MOU) or a "Fire Safe Council" (multisector group with multiple partners-see 2020 California Fire Safe Council Handbook). |
| PS-1.6 | Establish an advisory board(s) to ensure that community input is regularly considered in prioritizing and implementation. |
| PS-1.7 | Create and annually review and update focused CWPP work plans. |
| **Challenge PS-2: Existing wildfire mitigation efforts suffer from inconsistent and inadequate funding, making it difficult to support everyone.** | |
| PS-2.1 | Develop customized community outreach plans by housing type. |
| PS-2.2 | Hire NGOs to educate residents by housing type and demographic. |
| PS-2.3 | Measure education and outreach program effectiveness and adjust strategies. |
| PS-2.4 | Support experimental and interactive decision-making tools on the web including the Plant List Generator (link) and the certified "Service Provider's Directory" which enables the clients to review services received. |
| PS-2.5 | Discourage sales of flammable landscaping plants and mulches in regional nurseries and landscaping centers. |

| PS-2.6 | Collaboratively prioritize investments based on community wildfire risk assessments. |
|---|---|
| PS-2.7 | Monitor and adjust CWPP progress annually. |
| PS-2.8 | Systematically and aggressively engage collective action networks (e.g., Ashland Climate Collaboratives) to accelerate wildfire risk reduction. |
| PS-2.9 | Champion networks such as Ashland Climate Collaboratives to collectively reduce wildfire risk within a defined space. These networks may be informal groups, formal associations, public service organizations, partnerships, trusts, civic clubs, business coalitions, Firewise USA® neighborhoods, or similar. |
| PS-2.10 | Facilitate measuring and reporting of progress by all groups. |
| PS-2.11 | Develop wildfire-resistant home-hardening training for retrofitting older buildings. |
| PS-2.12 | Require home-hardening contractors to be certified in fire-resistant construction techniques. |
| PS-2.13 | Institute a fire-resistant landscaping best practices training and worker certification program that results in CEU's, a certificate, and listing on the city's website. |
| PS-2.14 | Maintain an interactive, publicly accessible trained contractors' database that enables clients to compare and rate the contractors. |
| PS-2.15 | Hire, train, and deploy crews for home hardening and defensible space work. |
| PS-2.16 | Promote standardized fire-resistant landscaping in maintenance contracts. |
| PS-2.17 | Identify incentives to encourage property owners and tenants to hire qualified contractors and maintain properties to wildfire risk standards. |

| | |
|---|---|
| PS-2.18 | Track, advertise, and celebrate businesses and property owners who have demonstrated achievement of wildfire safety goals. |
| PS-2.19 | Implement tailored education and outreach solutions by housing type and occupancy status. |
| PS-2.20 | Build and implement a sustainable funding model that drives wildfire mitigation, prioritizes vulnerable populations and high-risk areas, and taps into public-private partnerships, insurance incentives, and federal/state grants. |
| PS-2.21 | Start or utilize an existing foundation to get streamline access to tools and equipment and/or pay skilled workers to do wildfire risk reduction work for those who can afford to pay and those who can't. |
| **Challenge PS-3: Voluntary compliance has proven insufficient, leaving the community dangerously exposed to wildfire. Alternative strategies are needed to accelerate risk reduction efforts.** | |
| PS-3.1 | Expand the Wildfire Risk Assessment Program (WRAP) to be able to continuously perform around 1,000 strategically targeted personalized site assessments per year tailored to the housing type and demographic differences in the population. Assess wildfire risk based on capacity and funding using standardized protocols for ~300 apartment buildings and ~300 mobile homes in year one of funding. Assess multiplexes of all types in year two of funding. Assess single-family rental homes in year three. |
| PS-3.2 | Develop business, major institution, and critical infrastructure, risk assessment/reduction programs. Use professional assessors if warranted for liability reasons. |
| PS-3.3 | Draft wildfire risk reduction regulations for pre-existing structures, making it mandatory to take certain measures within three years of notice from the |

| | |
|---|---|
| | city. Extensions may be granted in certain cases. Implementation will be phased by priorities established by the oversight committee working with Ashland Fire & Rescue. |
| PS-3.4 | Develop a strategy and secure resources to enable functionally and financially challenged property owners to meet regulations within an established timeline. |

*Table 17: Paradigm Shift Initiatives*

# Section 11

# Codes and Ordinances

# Section 11: Codes and Ordinances

## Introduction

Codes and community planning in the City of Ashland should be aligned with the actual threat that is present. Ashland was proactive and visionary (the first and only community in Oregon to do this) in delineating the entire city as a wildland-urban interface (WUI) area in 2018, realizing their unique threat from wildfire. This change led to adoption of defensible space, flammable plant prohibition, and wildfire building codes for new construction. Codes are ubiquitous in all construction and building upkeep, unknown to many people who visit public and private buildings with these protections in place (fire sprinklers, kitchen hoods, fire walls, exiting, etc.). Codes are developed and enforced in response to tragedies. In the past 20 years, tragic wildfire events have taken place in areas around the country thought to be relatively safe from the threat of wildfire:

- Coffey Park in Santa Rosa, California during the Tubbs Fire in 2017.
- **Talent and Phoenix, Oregon during the Almeda Fire in 2020.**
- Louisville and Superior, Colorado during the Marshall Fire in 2021.
- Lahaina, Hawaii during the Maui Fires in 2023.
- Camarillo, California during the Mountain Fire in 2024.
- Altadena, California during the Eaton Fire in 2025.

These areas were not specifically designated as a high threat from wildfire, or delineated as WUI areas, but they still burned due to nearby wildfire spreading embers into these areas and catching structures on fire during extreme weather events. Extreme weather events are becoming more frequent with changes in climate. Wildfire seasons are also becoming longer. As a society, it is imperative to look at all solutions in a comprehensive approach to wildfire preparedness, prevention, and mitigation. Residents and businesses in Ashland want to survive extreme wind-blown wildfire with minimal impacts on continuity of life and business.

Anecdotally, voluntary compliance works incrementally over time, with a fraction of the population, while most individuals and organizations do nothing to mitigate wildfire vulnerabilities.

Codes and ordinances are enacted to provide requirements and direction to well-meaning uninformed individuals, and to those individuals who would prefer not to voluntarily comply regardless of how unsafe it may be. Using public outreach with recommendations and best-practices relies on voluntary compliance, which works for individuals and organizations with a higher sense of social responsibility, whereas requirements (code) work to protect everyone, including less socially responsible individuals.

> *"Partial community compliance, in the form of incomplete structure and parcel hardening, has very significant impacts across the entire community in high-density communities. Full community participation will be critical to hardening existing high-density communities."*
>
> (Maranghides et al., 2022)

The City of Ashland intends to establish new codes and standards that require compliance with best practices in wildfire preparedness for all homes and buildings (new and existing). Ideally, existing structures would be allowed time to mitigate wildfire hazards on their properties by structural hardening and vegetation management through a sunset provision that allows property owners time to comply, with the goal of 90% of structures in Ashland being compliant with IBHS Wildfire Prepared Home standards, or an equivalent city code, within ten (10) years. The intent is to provide financial assistance to lower-income households who will not be able to afford the necessary safety measures. There will be pushbacks at first, but recognizing the high-density nature of Ashland, and the inherent hazards present in the built environment, this is essential to the survival of Ashland's community and economy.

## Oregon WUI Code

Senate Bill 762 (Oregon State Legislature, 2021) was created with the intent to improve wildfire preparedness in the State of Oregon. Under Senate Bill 762, the responsibilities of the various state agencies were as follows:

- **Oregon State University (OSU):** Develop and update the wildfire "risk" map using the latest data.

- **Oregon Office of State Fire Marshal (OSFM):** Creates defensible space codes for high-hazard properties in the WUI.

- **Department of Consumer and Building Services (DCBS)**

  - **Building Codes Division (BCD):** Adopts fire-hardening building codes for new developments and significant updates in high-hazard WUI areas.

  - **Division of Financial Regulation (DFR):** Assists with wildfire insurance coverage.

At the time of this writing, the Oregon Legislature is intending to withdraw the state-wide hazard map and associated regulatory compliance. The outcome of this session will have an impact on Ashland's currently adopted code applications.

# City of Ashland Land Use Ordinance

Ashland's Land Use Ordinance is already proactive when it comes to wildfire. There are a handful of recommendations that are highlighted in this section which could help Ashland become more fire resistant and fire resilient.

The City of Ashland Land Use Ordinance classifies "wildfire lands" as lands with potential for wildfire, which are called out on a "Wildfire Lands Overlay" map. Fortunately, for ease of use and interpretation, Ashland's "wildfire lands" encompass the entire City of Ashland, as well as some outlying urban growth areas. (Ashland, 2024).



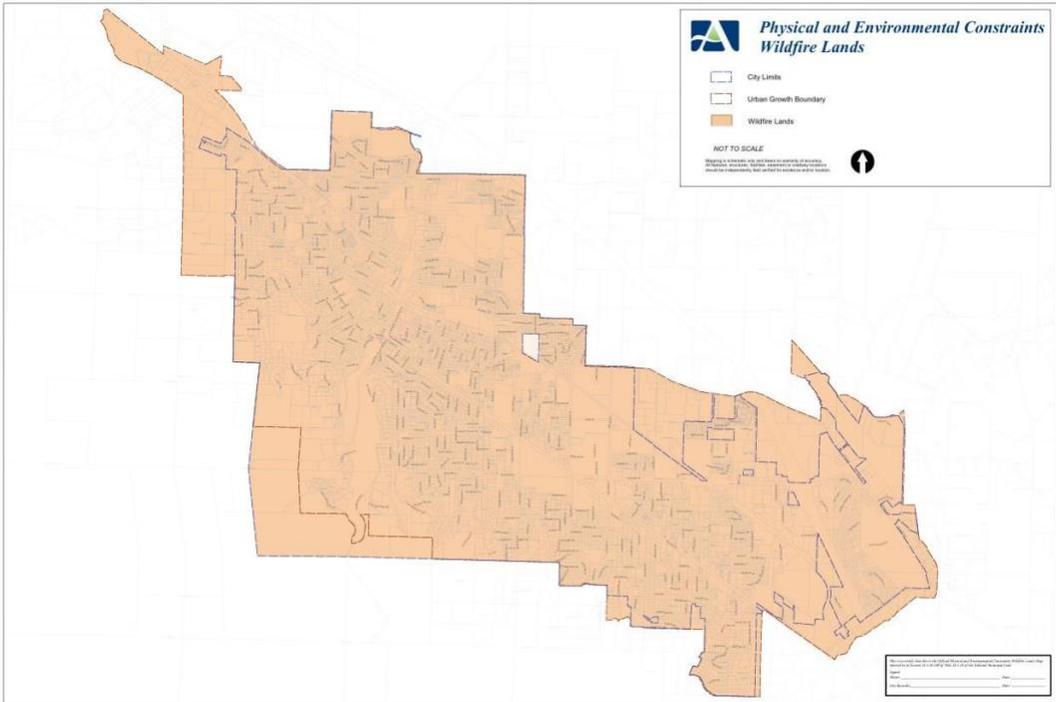*Figure 36: Aerial View of Ashland, Photo Courtesy of Ahturner*

*Figure 37: Ashland "Wildfire Lands" Map (2024)*

## Subsection 18.3.10.100.A – Requirements for Subdivisions, Performance Standards Developments, Site Design Review or Partitions

The Fire Prevention and Control Plan in the current ordinance only provides for certain attributes to be called out and maintained over time, with many of these being part of the work a civil engineer would normally be required to do. Unfortunately, most engineers (and architects) do not understand wildfire enough to plan accordingly. There is a great opportunity here to bolster the requirements for new developments by requiring a comprehensive **"Wildfire Safety Plan"** instead, which serves as a catalyst for long-term maintenance and protection of the community from wildfire. It is much more comprehensive and is written by a "special expert," which is defined in the 2018 International Fire Code (2018 IFC) as "an individual who has demonstrated qualifications in a specific area, outside of the practice of architecture or engineering, through education, training and experience." An excerpt from City of Boise Municipal Code is below. The City of Boise WUI Code was put together and placed

as a group of amendments in an empty chapter of the International Fire Code during the code amendment update process.

- 4103.2 Wildfire Safety and Mitigation Plan. Prior to or with a submittal of a preliminary plan or annexation, a Wildfire Safety and Mitigation Plan, with site plan, shall be prepared and submitted to the code official for review and approved as a part of the plans required for a permit.

- 4103.2.2 Content. The plan shall be based upon a *site-specific, wildfire risk assessment* that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions and fire history. The plan shall also address water supply, fire department access, structure ignition and fire-resistance factors, fire protection systems and equipment, defensible space and vegetation management, and other information as required by the fire code official.

- 4103.2.3 Maintenance. The Wildfire Safety and Mitigation Plan shall be incorporated into the CC&R's for subdivisions to ensure long-term maintenance and adherence to these requirements.

- 4103.2.4 Cost. The cost of plan preparation and review shall be the responsibility of the applicant.

- 4103.2.5 Plan Retention. The plan shall be retained by the code official.

- 4103.2.6 Qualifications. The plan shall be prepared by a special expert (e.g. wildfire mitigation specialist) or other person demonstrating competence and relevant experience or training. The preparer shall be acceptable and approved by the fire code official.

There is a distinct benefit that a Wildfire Safety Plan is written by someone who understands the nuances of wildfire, which most architects and engineers do not. Secondly, having the plan incorporated into the CC&Rs requires that the HOA Design Review Committee or Architectural Review Committee maintain the provisions of the plan over time, instead of relying on capacity-limited code enforcement personnel for continued enforcement.

## Subsection 18.3.10.100.B.2.d.i – (exception to 0 – 5' fuel-free area)

*"Combustible materials may be permitted within five feet of a structure when the Staff Advisor, in consultation with the Fire Code Official, has determined the portion of the*

*structure adjoining the combustible material is constructed with ignition-resistant building materials sufficient to reduce the spread of fire from the combustible materials."*

This exception is problematic. Ignition-resistant is not considered noncombustible and even noncombustible-sided structures (e.g., cementous siding, stucco, etc.) have openings under the sill where flames could get to the wood sheathing underneath. It is highly recommended to amend the ordinance to remove this exception.

## Subsection 18.3.10.100.B.2.n – (waiver of fuel modification area)

*"The General Fuel Modification Area standards outlined in subsection 18.3.10.100.B.2 may be reduced or waived when approved by the Staff Advisor in consultation with the Fire Code Official, provided it is demonstrated that the fire risk has been reasonably reduced such as in cases where ignition-resistant materials and construction methods, or vegetation type and separation, function to enhance the structure's protection from exterior wildfire exposure."*

The same principles apply for this subsection. It makes sense to create a sense of certainty in these situations by not allowing these subjective exceptions. Otherwise, officials may end up relying on untrained personnel to make the determination for this exception, which is unwise. It is highly recommended to amend the ordinance to remove this exception.

## Subsection 18.3.10.100.B.3 – Roofing

*"Where 50 percent or more of a structure's roof area is replaced within a five-year period, the roof covering shall be constructed or reroofed with a Class B or better roof covering."* If possible, it is recommended to change this to *"…a Class A roof covering or Class A roof assembly."*

## Subsection 18.3.10.100.B.4 – Fencing

Recent research by the National Institute of Standards and Technology (NIST) has shown that fire spreads from combustible (e.g., wood and vinyl) fencing to structures. Based on the location and configuration of the fencing they have prescribed recommendations in the NIST Hazard Mitigation Methodology (HMM). Table A recommends that any combustible fencing attached directly to a structure should have a minimum eight-foot (8') separation between the fence and the structure.

However, most fences also turn and run parallel to the side of the structure. Table B prescribes a ten foot (10') minimum fuel separation distance (MFSD) from any combustible fence section that runs parallel to the structure, for single fences. For double fences, they prescribe a MFSD of twenty feet (20') because of the increased fuel and heat release rates from double parallel fences (Maranghides et al., 2022).

To simplify matters, the ordinance could be amended to preclude the use of any single combustible fencing within ten feet (10') of any structure and preclude the use of any double combustible fencing within twenty feet (20') of a structure. This would apply to new construction and fence replacements only. However, additional language with a sunset clause could be added for existing fences (e.g., existing combustible fence sections within ten feet (10') of a habitable structure shall be replaced with noncombustible fence sections by 2030.)

The same requirements could also be adopted for other occupancy types, to include businesses, schools, etc.

## Subsection 18.3.10.100.D.1.e – (reduction of fuel modification area)

*"A reduction of the requisite fuel modification area in recognition of the use of fire-resistant materials and construction methods that function to provide the structure with reduced exterior wildfire exposure."*

Using this exception is a slippery slope and could expose the City of Ashland to increased liability. As previously mentioned, even noncombustible-sided structures have vulnerabilities that many people are unaware of. Additionally, plate glass windows still fracture around 180ºF and tempered glass windows fracture around 630ºF, which are relatively low temperatures (NFPA ASIP, 2023 Update). A fractured window allows embers and/or direct flames to get inside the structure.

It is recommended to remove this exception or use it only when the shape or configuration of a particular lot doesn't allow for building without using this exception, in which case there should be unequal and imperfect tradeoffs to make the structure safer (e.g., retaining walls, under eave sprinklers, interior sprinklers, etc.).

## Subsection 18.4.4.060.B.8, Wildfire Lands Overlay

To allow exceptions to minimum fuel separation distances by using the exception in subsection 18.4.4.060.B.8.d, it would be necessary to employ all the structure hardening requirements in Table D of the NIST HMM (Figure 38). It would be much easier to install noncombustible fencing as prescribed, or to replace combustible fencing sections, than to employ all of the necessary structural hardening required to protect the structure. See "fencing" section above for NIST recommended MFSDs for combustible fencing.

**Table D.** Structure hazard mitigation – hardening structure and attached combustibles against ignition from fire (radiation, convection).

| Item # | Structure Component – Exposure Distance (ED) or Structure Separation Distance (SSD) | Hardening Action | Performance Goal | Applicable Condition(s) |
|---|---|---|---|---|
| 1 | Roof covering and roof design (assembly) including dormer and bump out roofs | Replace non-Class A roofs by assembly or by covering alone | Prevent ignition of roof from flames | Non-Class A roof |
| 2 | Dormer side | Replace all combustible siding with noncombustible options | Prevent ignition of dormer from flames | Combustible dormer siding |
| 3 | Dormer under eave | Replace all under eave construction with noncombustible options or cover with noncombustible material | Prevent ignition of dormer from flames | Combustible dormer eave |
| 4 | Dormer window | Replace with dual pane window with both being tempered | Prevent complete window failure[a] | Single pane or dual pane non-tempered |
| 5 | Exterior wall(s) including bump out(s) | Add on top (of existing cladding) or replace with noncombustible cladding. Trim must be noncombustible | Prevent siding ignition | Combustible cladding facing exposures in Table B and/or Table C |
| 6 | Bump out bottom (underside) | If exposed framing, enclose with noncombustible material. If enclosed with combustible material, replace or cover with noncombustible material. Trim must be noncombustible and extend (vertically) to account for added material | prevent ignition under bump out(s) | Combustible bump out(s) underside material or exposed framing |
| 7 | Glazing in doors and glass sliding doors | Double pane windows (both panes tempered) | Prevent complete window failure[a] | Single pane non-tempered, non-tempered double pane, or double pane with one tempered facing exposures in Table B and/or Table C |
| 8 | Under eave(s) - overhanging eave and overhanging rake (gable end) | Create a soffited eave (horizontal) or enclose eave (angled) using noncombustible material | Prevent ignition in under eave area and entry of fire in residence | Under eave(s) combustible construction facing exposures in Table B and/or Table C |
| 9 | Screens | Screen over entire window(s) (even if window does not open) and other glazed surfaces. Framing for screens must be of noncombustible material | Reduce radiative exposures to glass and possibly to parts of frame | All glazed surfaces facing exposures in Table B and/or Table C |
| 10 | Windows | Replace with dual pane window with both being tempered | Prevent complete window failure[a] | Single pane non-tempered, non-tempered double pane, or double pane with one tempered facing exposures in Table B and/or Table C |

*Figure 38: Maranghides et al., HMM Table D (2022), Courtesy of NIST*

# Ashland Municipal Code

It is highly recommended not to wait for new consensus codes to come out before creating interim amendments that meet current knowledge in fire science for wildfire. New findings in fire science are evolving much quicker than the consensus codes, which do not reflect current best practices related to wildfire-prone areas. Some thoughts, considerations, and recommendations for the Ashland Municipal Code are as follows:

## AMC 16.12.080.F, Independent Consultants Retained by Fire Chief

Regarding this section of code, this is a proactive idea, which is not commonly seen in code amendments. It is highly recommended that Ashland take advantage and utilize this provision when necessary to assist with AF&Rs limited capacity.

# General Code Recommendations

City of Ashland wildland-urban interface and building ordinances should be updated to reflect more modern and science-based requirements, similar to comments provided in the previous section. There are numerous provisions which should be either included in both the body of the ordinance and this specific section or added as an amendment to this section. In addition, standard separation distance (SSD) should also be considered, along with enhanced defensible space requirements.

## Zone 0

Additionally, a zero-to-five-foot (0–5') fuel-free, noncombustible zone should be added to these requirements.

## Setbacks

Setbacks to natural open space areas should be increased from thirty feet (30') to a minimum of fifty feet (50') to meet best practices and HMM recommendations.

## Multifamily Housing

Consider creating an ordinance requiring owners of multi-family housing complexes, as well as owners and/or property managers of single-family residential rentals to structurally harden and

employ vegetation management as necessary, with a sunset provision to allow them time to comply.

## Manufactured Homes

Consider noncombustible or Class A ignition-resistant decking and skirting requirements.

## Accessory Dwelling Units

Consider adding language to require a structure separation distance (SSD), calculated from HMM tables, from the primary dwelling to any accessory dwelling, and a requirement for structural hardening. Accessory dwelling units should be constructed to the same standard as the primary dwelling (e.g., IR1 from IWUIC) and should be required to follow the same defensible space standards as the primary dwelling.

## Revise the Prohibited Flammable Plants List

Update the list using the best available science to address plant placement, spacing, maintenance, and species selection. Broaden the municipal code to cover highly flammable evergreen shrubs, vines, and ornamental grasses. To improve compliance with Oregon noxious weed prohibitions and align with expert recommendations, adopt a clearer, more enforceable language to code and ordinance restrictions.

## Plant and Tree Spacing

Plants should be set up in a zone concept, with either no plants or short-stature and highly fire-resistant plants (e.g., succulents) within the 0–5' zone, a little taller fire-resistant species spaced appropriately in the 5–30' zone, and taller fire-resistant and some non-fire-resistant species within the 30–100' zone (Figure 39; see NFPA Firewise USA® website for additional information).
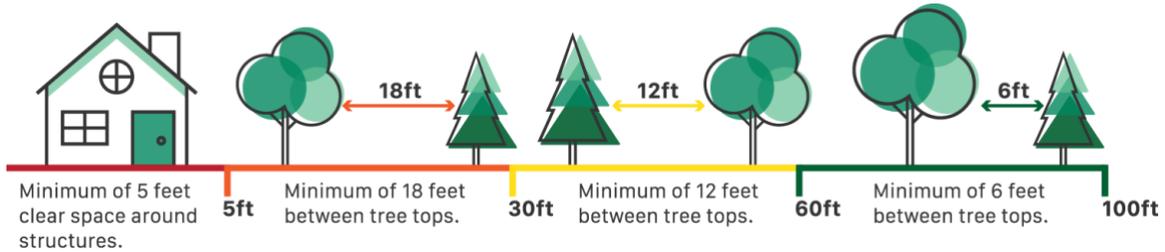
*Figure 39: Example of Tree Spacing, by Pacific Tree Preservation*

## Ignition Source Control

Ignition source control measures from the International Wildland-Urban Interface Code (IWUIC) should be considered for adoption as code amendments to help prevent human-caused fires from occurring.

# HOA CC&Rs

A majority of CC&Rs lack robust mitigation measures, and language related to emergency egress (evacuation). Adding language to CC&Rs to provide for increased safety from wildfire is necessary. This is much easier to do at the front end of a development, rather than years later vying for a majority or supermajority vote. Enforcement of CC&Rs and community rules, related to wildfire, should be emphasized year-round. Mitigation and continual maintenance are the key to a much safer community.

Minimalistic CC&Rs are sometimes desirable but lack the necessary requirements for real community safety from wildfire. Added language could include science-based considerations such as setback distance from other structures, setbacks from slopes, ignition-resistant design, separation of combustible fences from structures, restrictions for solid-fuel-fired appliances (e.g., portable outdoor fireplaces), etc.

CC&Rs should be reviewed by the current board and members, to address the need for more robust structural hardening and mitigation measures on and around properties in these communities. A certified city wildfire risk reduction specialist should review and approve relevant CC&Rs.

2025 Ashland Community Wildfire Protection Plan

# ICC International Wildland-Urban Interface Code

The International Code Council (ICC) provides consensus-based codes on a normal code cycle of three (3) years. The most recent version of the International Wildland-Urban Interface Code (IWUIC) is the 2024 IWUIC, which has pertinent updates and clarification on roof structures and ventilation openings. However, when trying to determine the actual relative hazard for a particular area it seems to be lacking. The IWUIC Fire Hazard Severity classification is based on the predominant fuel model in open space areas, critical fire weather frequency, and percentage of slope (ICC IWUIC, 2024). It does not include structures as fuel and does not include community attributes such as age and density of development (existing or new). Because of the nature of creating consensus codes, it does not match current research in fire-science and does not require a minimum separation distance for fences from structures. It is recommended that local fire code officials be in tune with current research findings in the field of wildfire heat transmission as it relates to structures and create relevant code amendments to that end.

# NIST Hazard Mitigation Methodology (HMM)

Further highlighting the need for purposefully thought out code amendments is the NIST Hazard Mitigation Methodology (HMM), which was created by the National Institute of Standards and Technology (NIST) in collaboration with the California Department of Forestry and Fire Protection (CAL FIRE) and the Insurance Institute for Business & Home Safety (IBHS) after thorough investigations of wildland fire disasters that resulted in significant structural losses (Maranghides et al., 2022). These fires included:

- The Waldo Canyon Fire in Colorado (2012), which resulted in two (2) fatalities and the destruction of 346 structures.

- The Black Forest Fire in Colorado (2013), which resulted in two (2) fatalities and the destruction of 511 structures.

- The Camp Fire in California (2018), which resulted in eighty-five (85) fatalities and the destruction of 18,804 structures.

- The Marshall Fire in Colorado (2021), which resulted in two (2) fatalities and the destruction of 1,084 structures.

While not a code document itself, the NIST HMM provides guidance to inform the code development process. It views structures as fuel that can contribute to further destruction within the built environment, separate from the wildfire's direct effects. It quantifies the impact of wildfire on structures and combustible materials to determine minimum separation distances needed to prevent additional ignitions. The HMM considers the entire community, not just individual parcels, to reduce ignition risks regardless of location or ownership.

The primary objectives of the HMM are to (1) protect homes and property to minimize losses, and (2) prioritize cost-effective protection measures.

These goals are achieved by balancing mitigation efforts to reduce potential fire and ember exposures, and by hardening structures to resist ignition. **Effective mitigation involves a balance between exposure reduction and structural hardening** (Figure 40). If exposures are eliminated (as prescribed in the HMM), no hardening is needed. Conversely, a structure hardened to extreme levels, like a windowless concrete bunker, could survive severe exposure.

The HMM also examines the impact of fuel packages and continuity (e.g., combustible fences, auxiliary structures, decks, vehicles, and combustible storage) and how they can transfer fire to each other and to primary structures within a community.



*Figure 40: HMM Dials Graphic, Maranghides et al. 2022*

The HMM then determines the minimum separation distance from both built and vegetative fuel packages (plant material that can act as fuels) and provides recommendations for structure

hardening to reduce structure ignition from radiant heat, embers, and direct-flame impingement. Structure loss from wildfire has been prevalent across the western United States over the past twenty to thirty (20–30) years. The HMM provides a science-based method to address structure ignition and the potential subsequent loss, as well as to inform future code amendments and adoptions. Figure 41 displays a graphic of the evolution of HMM following beginning stages of early experiments and building codes.
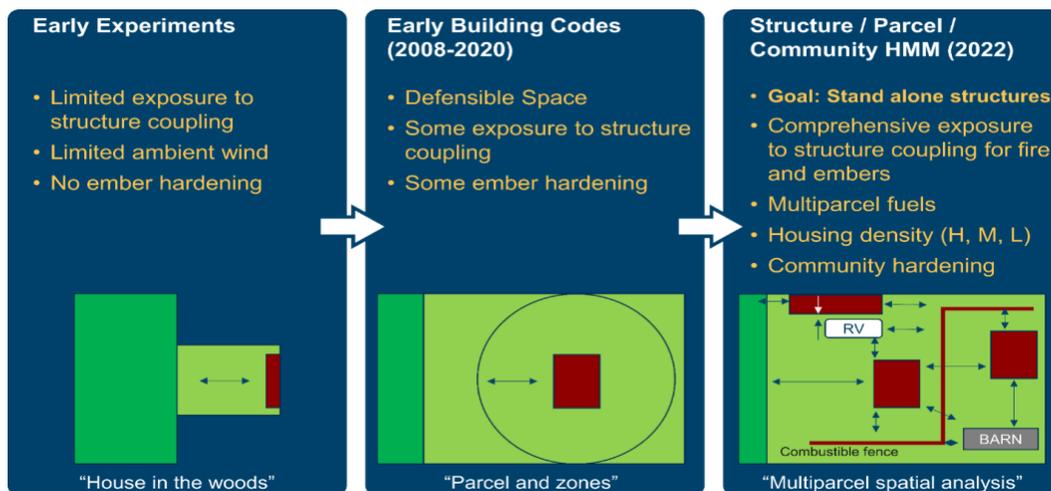


*Figure 41: HMM Evolution Graphic, Maranghides et al. 2022*

*"Historically, codes have been parcel-centric and address exposures in the context of protecting a residence from the exposures on the same parcel."*

*–NIST HMM, 2022*

## Summary

HMM provides a clear science-based understanding of the protection of structures from ember and flame exposures. Concepts and specific components of the HMM should be included in code amendments at the state, county and municipal level, with consideration for enforcement at the HOA level.

Codes and standards, CC&Rs, and rules and regulations, can be modified to account for the inherent wildfire risk to the City of Ashland. It is highly recommended to start with stakeholder meetings as an approach to build buy-in from all stakeholders. Providing solid, science-based education and outreach to owners and other stakeholders who may not have an in-depth understanding of wildfire is an effective method for providing background information on the inherent risk of wildfire to the Ashland community.

Fortunately, the City of Ashland and community are already interested in furthering their protection from the real threat of wildfire, and these activities are not impossible to complete. It takes all the community working together from leaders to citizens.

This document is not exhaustive and does not provide every recommendation and best practice available to communities in wildfire-prone areas, but it provides a platform to promote wildfire awareness and both individual and collective mitigation actions in the City of Ashland. The work that homeowners do around their properties helps firefighting resources by allowing them to do their job more efficiently and effectively, spending less time protecting homes and more time putting the fire out. Homeowners are a first line of defense and can make all the difference on how a fire plays out on the landscape. That is precisely why the HMM construct is so important to employ in wildfire-prone communities.

## Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

## Code and Ordinance Challenge Statements

**Challenge CO-1:** Ashland Land Use Planning ordinances need updates to the best available science-based requirements for new developments.

**Challenge CO-2:** Ashland Municipal Code lacks robust and current science-based requirements for new and existing structures.

**Challenge CO-3:** City of Ashland staff are at or beyond capacity and don't have the time available to ensure compliance.

**Challenge CO-4:** Many HOA CC&Rs in Ashland lack wildfire risk mitigation requirements, and some directly conflict with best practices and municipal codes.

*Figure 42: Code and Ordinance Challenge Statements*

## Baseline Conditions

- State of Oregon wildfire hazard mapping and associated requirements are in a state of flux and not entirely reliable currently.
- Associated OSFM defensible space requirements are not as comprehensive as they could or should be.
- Ashland currently has Land Use Planning Ordinances and the Ashland Municipal Code in place with varying levels of requirements in "wildfire lands."
- There is a requirement for a non-comprehensive "Fire Prevention and Control Plan" with no expectation of having a professional in the field of wildfire write the plan.
- There are many additional components of the Land Use Planning Ordinance which could be bolstered.
- Ashland Municipal Code is missing some key requirements to help protect and enhance the safety of the citizens of Ashland from the real threat of wildfire.

- HOAs in Ashland have minimal requirements in CC&Rs regarding the protection of their specific communities from wildfire.
- Current codes, ordinances, and CC&Rs aren't strong enough, and do not meet best practices related to current science-based research on wildfires and the built environment.

## Desired Conditions

- It is desired that codes, ordinances, and land use planning work together for the protection of the City of Ashland from the threat of wildfire.
- Tracking Metrics
- Tracking metrics could include the number and year of code amendments, and the number of CC&Rs updated. Other metrics may be determined as workplans are created.

## Monitoring Plan

- The monitoring plan for this is simply noting whether anything has changed.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Code and Ordinance Initiatives | |
|---|---|
| **Challenge CO-1:** Ashland Land Use Planning ordinances need updates to the best available science-based requirements for new developments. | |
| CO-1.1 | Create an internal interdisciplinary Wildfire Mitigation Team (WMT) to facilitate seamless and efficient implementation of the CWPP across city departments. |
| CO-1.2 | Bolster wildfire resilience requirements for city development through consistent planning and zoning. |

| | |
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| CO-1.3 | Revise wildfire resilience codes for existing properties to maximize wildfire resilience. |
| **Challenge CO-2:** Ashland Municipal Code lacks robust and current science-based requirements for new and existing structures. | |
| CO-2.1 | Adopt improved science-based wildfire code amendments (may warrant hiring a consultant). |
| **Challenge CO-3:** City of Ashland staff are at or beyond capacity and don't have the time available to ensure compliance. | |
| CO-3.1 | Research best practices from other self-sustaining city wildfire code and ordinance programs. |
| CO-3.2 | Hire a full-time wildfire risk inspector to ensure consistent and timely code compliance. |
| **Challenge CO-4:** Many HOA CC&Rs in Ashland lack wildfire risk mitigation requirements, and some directly conflict with best practices and municipal codes. | |
| CO-4.1 | Promote meetings and trainings for HOA Board Members, Architectural Review Committees, and Design Review Committees to promote wildfire prevention best practices and update CC&Rs accordingly. |
| CO-4.2 | Encourage wildfire risk reduction champions and other knowledgeable community members to share expertise and inspire action. |
| CO-4.3 | Help HOAs make appropriate wildfire prepared structure and landscaping choices for inclusion in CC&Rs. |

*Table 18: Code and Ordinance Initiatives*

Section 12

# Landscape Resiliency

# Section 12: Landscape Resiliency

## Introduction

The Shasta, Takelma, and Athabaskan peoples with their ongoing presence and legacy of intimate relationships between nature and people has not been forgotten, and the infusion of past and present knowledge is welcomed to help chart a new course.

Native American communities were the original stewards of these lands, skillfully managing forests, woodlands, and grasslands with fire and traditional ecological knowledge to sustain its health and resilience. Building on that enduring legacy, present-day land managers have, over the past few decades, earned a national reputation for innovative, landscape-scale forest stewardship. This section calls for the evolution and expansion of Ashland's proven management framework—the City of Ashland Forest Plan with thirty (30) years of project work, and fifteen (15) years of the Ashland Forest All-Lands Resiliency (AFAR) project—to meet the challenges of rapidly changing forest health and wildfire conditions.

Originally piloted by the City of Ashland on municipal lands starting in 1995, the "restoration forestry" approach recognizes the significant changes that have taken place in our forests due to fire suppression and the end of indigenous burning and works to reduce overly dense forests and return the beneficial role of mild fire. Although climate change adaptation was not the original goal, these treatments have become critical defenses against the uncharacteristic wildfires and insect outbreaks now reshaping forests across the western United States. With a legacy of active stewardship and innovation, Ashland is uniquely positioned once again to lead—adapting its beloved forests to thrive in an era of unprecedented change.

## Local Wildfire Environment

The current fire environment surrounding Ashland is shaped by a combination of climatic, ecological, and human factors. Ashland is located within the Klamath-Siskiyou ecoregion, known for its rugged terrain, mixed conifer forests, and frequent wildfire activity (USDA Forest Service, 2021). This fire-dependent ecoregion has experienced more than a century of fire exclusion, resulting in dense

secondary growth and atypically dense woody vegetation in forested areas (Halofsky, 2016 and 2020, Metlen et al., 2017).

The region experiences a Mediterranean climate, with hot, dry summers and cool, wet winters, creating conditions conducive to wildfire ignition and spread (Abatzoglou & Williams, 2016). Historically, wildfire played a crucial role in maintaining the health of local ecosystems, with Indigenous communities using controlled burns to manage vegetation and promote biodiversity (Lake & Long, 2014). However, fire suppression and exclusion policies implemented in the early 20th century have led to increased fuel loads, exacerbating the severity of wildfires in recent decades (Hessburg et al., 2019; Halofsky et al., 2020). Additionally, changing climate conditions—characterized by rising temperatures, prolonged droughts, and altered precipitation patterns—have further intensified fire risk in the region (Westerling, 2016; Halofsky et al., 2020).
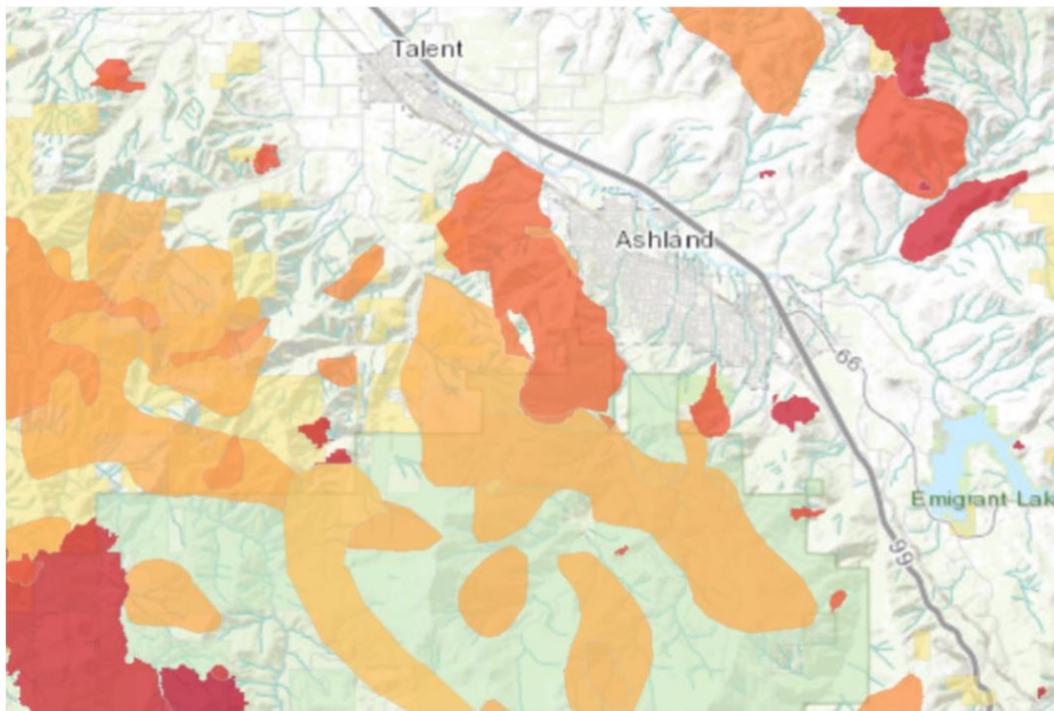


*Figure 43: Large Fires from 1893-2019.*

Ashland and the surrounding Rogue Valley have witnessed a significant increase in wildfire activity, particularly in the 21st century. Notably, the 2020 Almeda Fire devastated the nearby communities of Talent and Phoenix, highlighting the growing threat in the region (Oregon Department of Forestry [ODF], 2021).

## Ecosystem Services at Risk

The Ashland Creek Municipal Watershed, and surrounding forests in adjacent watersheds, contribute to the quality of life enjoyed by Ashland residents, along with the inherent ecosystem value apart from its utility to humans. Much of what is now Ashland has been derived from, or currently relies on, forest-dependent ecosystem services such as clean drinking water, outdoor recreation, aesthetic settings, wood products, fresh air, and spiritual refuge. Forests are part and parcel of the community and present a double-edged sword between amenities and wildfire risk to the built environment and economy. With over 80% of the city's drinking water derived from the Ashland Watershed, forests are a literal lifeblood of this community.

Habitat is also a critical value in the Ashland Watershed, all the federal land in the watershed falls under the designation of Late-Successional Reserve:

> *"Late-Successional Reserves are identified with an objective to protect and enhance conditions of late successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth forest related species including the northern spotted owl."*
>
> *(USDA Forest Service, 1994)*

Wildfires near or in forested neighborhoods and wildlands are a significant and growing threat to dry forest ecosystems and the many values they provide. Compounding the wildfire issue, climate change is also shifting ecological niches, forcing adaptation and/or migration which many species are unable to do in such short order. Among tree species, this has been documented in Northern

California by Standford University researchers and deemed the "zombie forest" phenomena (Stanford Report, 2023).

# Changes and Challenges Facing Ashland's Forests

## Tree Mortality

As documented by Bennett et al (2023), Douglas-fir die-off seen across the Rogue Valley was due in part to "hot drought", or high temperatures combined with long periods of significantly low rainfall, conditions likely created by climate change. Aerial Detection Surveys (ADS) done by the Pacific USDA Forest Service – Southwest Oregon Service Center (based in Medford, OR), documented over 250,000 acres of Douglas-fir mortality, focused near valley margins and surrounding communities in southwest Oregon from 2022 to 2024 (U.S. Forest Service, 2024).

In 2023, the Ashland City Council approved an addendum to the 2016 Ashland Forest Plan that updated and expanded the original chapter on climate change. The addendum was utilized as a basis for Phase One of the Ashland Forestlands Climate Change Adaptation Project; a rapid response to unprecedented tree die-off in the lower Ashland Watershed after years of drought and record heat. In April and May of 2024, the city was able to remove dead and dying trees on approximately 400 acres of municipal forestlands adjacent to the community. The city, via Timberline Helicopters, removed over 600,000 board feet of dead and dying wood and sold it to a local mill, creating revenue to offset 40% of the project cost. Pile burning of dead and down limbs and treetops completed Phase One in spring 2025. A subsequent phase is being planned to plant appropriate species for aspects, elevation, and anticipated heat and drought.

The city was able to react quickly to this novel situation that posed a threat to the community and municipal watershed. Unabated, the accumulation of dead trees on the Rogue River-Siskiyou National Forest adjacent to homes, and at the base of the Ashland Municipal Watershed, will erode the accomplishments, purpose and need of the Ashland Forest Resiliency (AFR) Project, and minimize the benefits of work now complete on adjacent city-managed forestlands (see map below).
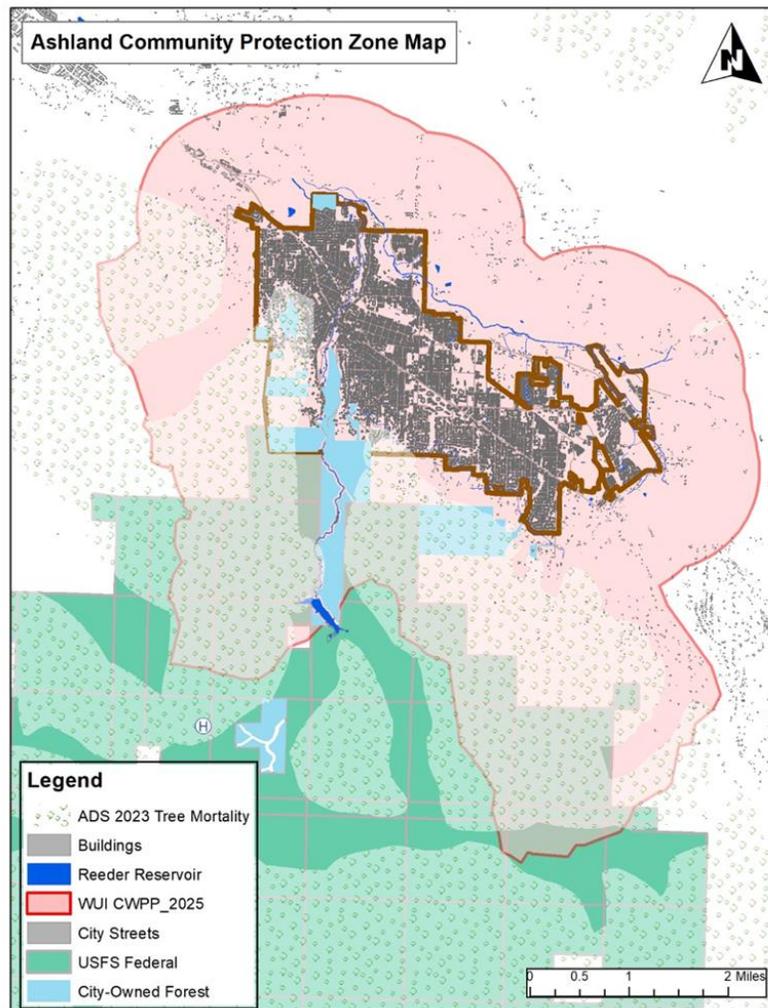
*Figure 44: Bark Beetle-Caused Tree Mortality in the Lower Ashland Watershed and CWPP WUI Zone Across City, USFS, and Private Lands*

Figure 44 shows Tree mortality data from USDA Forest Service Aerial Detection Surveys, with the extent of bark beetle mortality across the Ashland WUI area and into the municipal watershed. USFS property is shaded green, with significant bark beetle mortality captured by annual Aerial Detection Surveys (ADS) done by the local USFS Insect and Disease Service Center (City of Ashland GIS map). Work has been completed on city-owned and many private parcels as of April 2025.

The city envisions working with the USFS on a focused and rapid response to determine the extent that past, present, and future tree mortality is increasing wildfire danger adjacent to the community, and at the base of the municipal watershed. Federal land managers have options that allow for relatively small projects to be undertaken without extensive investments in staff time and without years of studies and reviews. The city's climate change adaptation project was supported by community members and City Council. A well-crafted, targeted project on adjacent USFS federal land stands to garner similar support and is a high priority for community and watershed protection.

## Mt. Ashland Ski Area: Physical and Economic Infrastructure at Risk

Mt. Ashland Ski Area was established in 1964 and welcomes over 100,000 skier visits in a normal year, contributing $7.3 million to the local economy (Mt. Ashland Association, 2024). Mt. Ashland lies at the peak of the Ashland Watershed, amid dense forests of true fir, mountain hemlock, and scattered western white pine. Infrastructure on the mountain includes five (5) chairlifts, a surface lift, two (2) lodges, outbuildings, and associated power, water, and sewer infrastructure. Also located on the mountain, though not owned by the Mt. Ashland Association, are communications and broadcasting infrastructure as well as the National Weather Service's Doppler Radar installation.

There have been no specific, organized efforts by the Rogue River-Siskiyou National Forest or the Mt. Ashland Association to reduce wildfire exposure to the built or natural environment on the mountain. Though higher elevation forests at the ski area have a shorter fire season their characteristic fire regime is that of mixed to high intensity, stand-replacing fire on infrequent intervals as compared to low elevation (cool white fir plant association = 65-75 years and moist mountain hemlock = 100-120 years), forests that historically experienced low intensity fire at frequent intervals (dry Douglas-fir = 5-15 years)  (USDA Forest Service, 2003). Though a high-intensity wildfire may be characteristic of the mountain's high elevation, mesic forest, it would be detrimental to Mt. Ashland's infrastructure and its economic and recreational benefits to the community.

A critical need for the survival of the Mt. Ashland Ski Area is to create a plan that addresses wildfire vulnerabilities, increases structural hardening and defensible space around key assets, and manages fuel loads on the mountain and around the ski area infrastructure. Small projects to address wildfire risk are possible under federal land use planning guidelines (Ruckriegle, 2021). Initial discussions between the Mount Ashland Association (MAA) and Rogue River-Siskiyou National Forest

staff regarding wildfire issues at the ski area have been productive. According to the Mt Ashland Association, efforts are underway to earmark budgets to begin the process of mitigating risk. Making this a CWPP priority will help efforts to secure further funding.

## Adapting to a Hotter, Drier, and More Fire-Prone Future

The 2004 Ashland CWPP was written in response to the Rogue River-Siskiyou National Forest's solicitation of the City of Ashland to engage more broadly in an expanded vision for restoring dry forest in the Ashland Watershed. These forests had departed from their historic composition, structure, and function. This required the city to submit an alternative project proposal embedded in a CWPP, meeting the letter of the 2003 Healthy Forests Restoration Act. The city's "alternative" was substantively adopted by the Forest Service.

The Rogue River-Siskiyou National Forest's purpose for the newly coined Ashland Forest Resiliency (AFR) Project was "to protect values at risk, reduce crown fire potential and obtain conditions that are more resilient to wildland fires", while the need was "for urgent reduction of large-scale, high intensity wildland fire in the Upper Bear Analysis Area". There was no mention of climate change in AFR Project foundational documents.

Since the AFR Record of Decision (USDA, Forest Service, 2009), and now after fifteen (15) years of implementing the AFR project on 14,000 acres of forestlands, conditions in the forests have changed, notably at lower elevations. Increasingly extreme heat and drought has led to insect outbreaks that have reached epidemic levels, with Douglas-fir (DF) tree mortality measured via drone-based aerial data at 20% (range on the city's forestlands in the lower watershed (City of Ashland, 2023). That percentage has only increased in the past year, especially where dead and dying DF trees have not been removed, as they had been on the majority of impacted acres owned by the city.

*"Resulting interactions between historical increases in forested area and density and recent rapid warming, increasing insect mortality, and wildfire burned areas, are now leading to substantial abrupt landscape alterations. These outcomes are forcing forest planners and managers to identify strategies that can modify future outcomes that are ecologically and/or socially undesirable."*

(Hessburg et al, 2021)

Some locations have seen up to 75% die-off and smaller pockets up to near complete DF mortality; a phenomena dubbed by Bennett et al the "Douglas-fir decline spiral" in a 2023 research paper by Oregon State University (OSU) and the U.S. Forest Service (USFS), who utilized data for their research from the forests surrounding Ashland and the Rogue Valley (Bennett et al, 2023).

When looking at what's happening in western United States forests, there are alarming trends:

- Insect outbreaks in the mixed-conifer Sierra Nevada forests of California (State of California, 2022) and forests in the Rocky Mountains (University of Colorado, 2012) have impacted thousands of square miles of forests.

- Fuel accumulations and hotter and drier weather have led to mega-fires that have impacted communities and disrupted critical ecosystem services (Stephens et al, 2022).

- Forest loss, called type conversion,  is being documented in the west (U.S. Geological Survey [USGS}, 2022), with shifting climate zones (Stanford University, 2023), insect outbreaks, severe fires, and over a century of departure from historic frequent fire regimes (Hagman et al, 2021) coinciding over vast areas like the Southern Sierras of California (Steel et al, 2023).

- Recent research on forest regeneration after fires underscores the need for quick management action to maximize the chance for desirable tree species to establish and persist. Avoiding high severity fire that can quickly alter ecosystem function (the conditions for forests to persist) is critical in frequent dry forests like those in the majority of the Ashland Watershed (Davis, 2023).

- The "Douglas-fir Decline Spiral" documented in SW Oregon, affecting the city's own forestlands and adjacent private and federal land (Bennett et al, 2023).

There is more scientific certainty in the root causes of our current forest conditions, as well as certainty in the efficacy of treatments that have been part of Ashland's stewardship "toolbox" for decades. Publications like "Wildfire and climate change adaptation of western North American forests: a case for intentional management." by Hessburg et al (2021) summarize dozens of previous studies and answer key questions commonly asked about forest management.

> *"While there are many important lessons to learn from the past, we believe that we cannot rely on past forest conditions to provide us with blueprints for current and future management."*
>
> (Millar et al, 2007)

With a sense of urgency in recognizing the predicted and already increasing climate change impacts to local forests, escalating community wildfire risk, and the threat to municipal drinking water, the Ashland City Council adopted the Ashland Forest Plan Climate Change Addendum in April of 2023. The Addendum, within the context of the 2016 Ashland Forest Plan, provides a solid foundation for the first phase of climate adaptation projects not only on city-managed forests, but also across adjacent USFS and private forests.

The city's policy represents a shift in philosophy from decades of extensive and excellent work done between 1995 and the current day under the objective of forest restoration. Restorative work completed to date has turned out to be the building blocks of climate change adaptation. Promoting forest health and vigor through tree thinning, fuels reduction to minimize fire severity, and planting of pine species better adapted to a warmer and drier climate have been ongoing for decades and create a firmer footing than many unmanaged landscapes.

Ashland's history of active stewardship across city, federal, and private lands positions the city to respond to changing conditions with a variety of options that would not have existed otherwise. The change from restoration (using past reference conditions) to adaptation is spelled out well in the following excerpt from Stephens et al in 2010: *"While there are many important lessons to learn from the past, we believe that we cannot rely on past forest conditions to provide us with blueprints for future management. To respond to this uncertainty, managers will be challenged to integrate adaptation strategies into plans in response to changing climates."*

More narrowly, objectives from the 2023 Ashland Forestlands Climate Change Addendum can be useful as guides to apply to the entire Ashland Watershed and adjacent drainages:

- Shift from the restoration paradigm that guided previous forest planning and management to an enhanced adaptive management strategy that incorporates new science and technology to effectively address climate change-induced forest land conditions that are likely without historic reference.

- Maintain and promote refugia conditions and stand characteristics to buffer against climate change impacts to allow diverse habitats to persist. Develop a finer scale approach to refugia delineation, where appropriate.

- Enhance and maintain a variable mosaic of forest structure conditions and fuel loads. For example, creating openings in the forest canopy to reduce potential crown or ground fire intensity from continuous tree canopies or surface fuels. Growing shade intolerant and fire tolerant species would be balanced with higher tree densities and fuel loading in other areas such as riparian areas.

- Manage to promote and maintain healthy, functional, and productive soil conditions.

- Plan for increasing frequency and intensity of extreme precipitation events that could negatively (or positively, in some cases) impact soils and aquatic resources, resulting in the loss of ecosystem services and damage to Ashland's built environment including road systems, trails, infrastructure, and other downstream assets and values.

- Anticipate and proactively treat tree mortality events to reduce excessive fuel accumulations. Additionally, implementing a rapid response for the strategic and timely removal of dead and dying trees will reduce overall costs of treatment, enhance public safety, and contribute to the local timber supply (only as a by-product of ecosystem management).

- Mitigate the increasing impact of habitat loss on wildlife populations from wildfire, weather pattern changes, insects and disease outbreaks, and pressures from recreational use on National Forest lands because of climate change while considering adjacent land ownerships.

- Monitor, evaluate, and regulate recreation resource users to protect ecosystems from the additive stressors of climate change and to protect the recreation resource itself.

An important source to consult is the U.S. Forest Service General Technical Report (GTR) PNW-GTR-995, titled "Climate Change Vulnerability and Adaptation in Southwest Oregon" (Halofsky et al., 2022). This GTR outlines a regional approach created by a group of technical experts for all federal lands in southwest Oregon, including the Ashland Watershed. Key takeaways include adaptation strategies and vulnerability assessments for critical resources and species of concern.

## Further Protecting and Enhancing the Municipal Water Supply

The upper portion of the Ashland Watershed was not a priority treatment area in the AFR Environmental Impact Statement (EIS). Though the Community Alternative in the 2004 Ashland CWPP did advocate for a broader footprint into the upper Ashland Creek Watershed, it was ultimately reduced (City of Ashland, 2004).

An analysis of areas treated as of 2025 in the AFR footprint as a proportion of the drinking water drainage area, here called the "Reeder Watershed" after Reeder Reservoir, the city's collection point for domestic water, shows that 33.8% of the Reeder Watershed was treated to reduce fire intensity during the AFR project. Though significantly reducing the intensity of a wildfire coming from the lower Ashland Watershed or adjacent watersheds, AFR treatments do not affect a large proportion of an area critical to maintaining municipal water quality, or to protecting a key community recreational resource in the Mt. Ashland Ski Area. A high intensity wildfire within the Reeder Watershed could still result in sedimentation into the reservoir itself as well as the loss of critical late successional habitat, two (2) key goals of the AFR project (U.S. Forest Service, 2009).
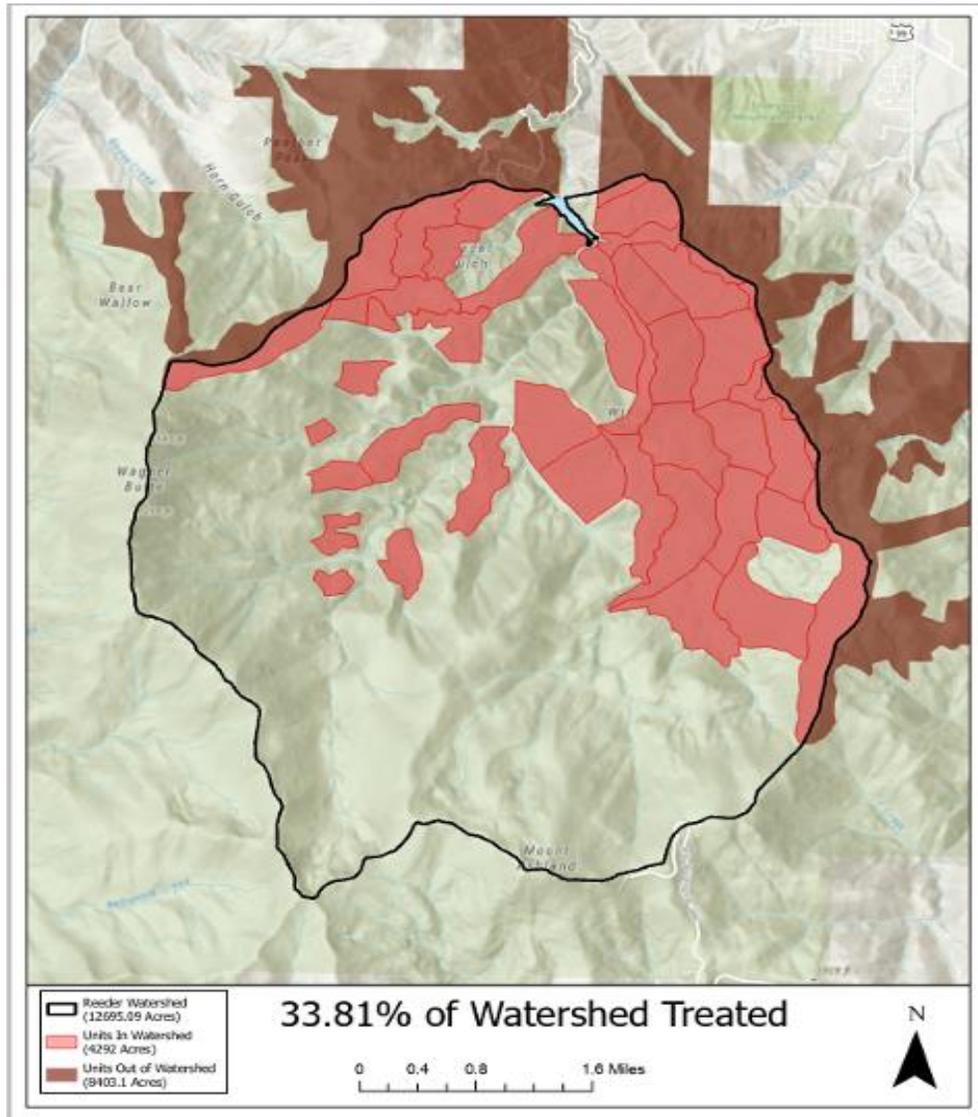
*Figure 45: The AFR project footprint, showing areas within the drainage to Reeder Reservoir (Reeder Watershed) where forest thinning was completed through 2023 (light red shading). Unshaded areas in the same black outline received no treatment.*

Since the Reeder Watershed drainage supplies approximately 80% of Ashland's drinking water (Ashland.news, 2024), snowpack in the Reeder Watershed is a critical issue for the community. Snowpack has been a limiting factor recently, with "supply deficiencies" due to low snowpack in 2014, 2015, 2018, and 2020 (City of Ashland, 2023). An overlooked component of snowpack is forest cover. When snow falls onto trees and doesn't reach the ground, it is lost to the atmosphere through evaporation or sublimation. In Arizona, researchers analyzed changes in forest cover due to forest restoration treatments that removed overly dense trees. They found in areas where canopy was reduced, more snowpack was retained, and later into the spring season, with the assumption that would equal higher rates of groundwater recharge (Sankey et al, 2015). Similar results were found by Sun et al (2022), among many other authors and research papers refenced by Sun. Key points from Sun et al include:

- Canopy density effect on peak snow accumulation and snowpack duration varies with winter climates.

- Canopy thinning is most effective in wet/warm winter climates for improving snowpack duration; this applies to the Ashland Watershed.

- Greatest decrease in snowpack duration under warming is anticipated for snowpack under dense canopy in presently warm winter climates.

The Ashland Watershed's climate fits that of wet/warm, which points to opportunities to further evaluate ecologically appropriate strategies to increase snowpack by strategically thinning and/or burning forests where multiple objectives, such as fire management and increased water yield could be realized. Worth further investigation is restoring fire to the landscape as a critical means of maintaining or enhancing/expanding open meadow and glade habitats for multiple benefits to wildlife, plant diversity, snowpack, and fire management. For example, the "Wagner Glades" are a significant non-forested ecological feature in the upper Ashland Watershed.

## Planning Frameworks: Potential Operational Delineations (PODs)

In 2019, the AFR partnership engaged with Chris Dunn, PhD of Oregon State University (OSU) and the USFS Rocky Mountain Research Station as a component of effectiveness monitoring, funded by an Oregon Watershed Enhancement Board (OWEB) grant. Dunn and his team engaged with the AFR

Partnership and later the whole community leveraged the significant progress made on the ground by AFR in creating opportunities to manage wildfire across the forest surrounding Ashland. Dunn and colleagues brought to bear a nationally recognized planning process called Potential Operational Delineations, or PODS:

*The Potential Operational Delineations (PODs) process is a framework for cross-boundary, collaborative, and integrative fire planning that can support place-based implementation of the National Cohesive Wildland Fire Management Strategy. PODs are based on best available science about fire operations and risks to communities, ecosystems, and responders. The PODs process is holistic. It brings together local managers and stakeholders to plan for future fires using a sophisticated science framework (Thompson et al., 2022).*

The resulting report for the AFR Project, incorporating community input through workshops, outlines the opportunities created through fuels reduction and forest restoration, potential fire control locations, and combines values such as water source protection and community fire protection into a framework for future landscape fire management, including using prescribed fire in the most advantageous locations. The PODs framework could be further leveraged to build on climate resiliency indicators as well.
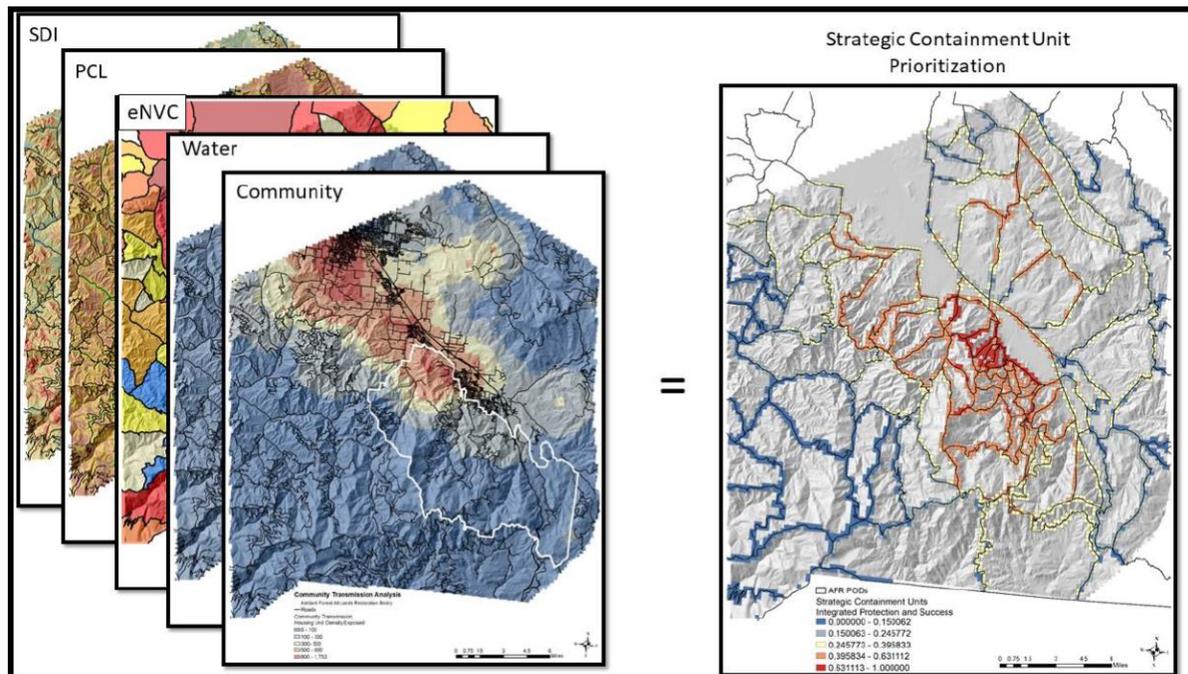
*Figure 46: Combination of Data Layers and Containment Units to Create a Strategic Landscape Prioritization (Dunn and Bailey, 2020)*

## Planning Frameworks: Climate-Smart Conservation

A long-term plan to help the landscape adapt to changing future conditions is a critical need. By convening a multi-disciplinary technical team representing key interests and stakeholders, it is possible to set the stage for another successful partnership project that stands to garner the support, funding, and acclaim the AFR Project has achieved in 15 years of work. There are various frameworks for planning ahead for watershed resiliency and adaptation. One useful framework that could serve as a model is called Climate-Smart Conservation (Stein et al, 2014).

*Figure 47: Climate-Smart Conservation Cycle*

# Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

## Landscape Resiliency Challenge Statements

**Challenge LR-1:** Recent tree die-off in the lower Ashland Watershed is increasing fire danger to the community, watershed and trails.

**Challenge LR-2:** Critical infrastructure and economic assets at the Mt. Ashland Ski Area are at significant risk of wildfire.

*Challenge LR-3: The changing climate threatens the ecological integrity of the Ashland Watershed and there is currently no plan to address this risk on federal lands as there is on city lands.*

*Figure 48: Landscape Resiliency Challenge Statements*

## Baseline Conditions

- Tree mortality (primarily Douglas-fir) at lower elevations in the Ashland Watershed has been mapped at Moderate (11-29%) by USFS Aerial Detection Surveys. City mapping has identified areas of much higher mortality rates.

- No structural hardening, defensible space, or fuels management projects have been completed to date at the Mt. Ashland Ski Area, leaving the area at high risk of wildfire.

- The vast majority (~85%–90%) of the Ashland Watershed is federal land managed by the U.S. Forest Service. The City of Ashland manages only ~1,100 acres of the ~16,000 acres (25 square miles) of the watershed.

- Previous goals of restoring historic forest conditions are now insufficient to sustain rapidly changing ecological conditions in the watershed. No comprehensive plan for climate change adaptation exists for federal lands in the Ashland Watershed.

## Desired Conditions

- Develop and implement a rapid, collaborative response with the U.S. Forest Service to address increased wildfire risk caused by widespread lower elevation tree mortality adjacent to Ashland and the municipal watershed, ensuring long-term protection of community, forest, and water resources.

- Wildfire hazards and risks to high-value resources and assets at the Mt. Ashland Ski Area have been fully mitigated by 2036.

- A "climate-smart" comprehensive plan for the entire Ashland Watershed is in place and being implemented to respond to uncertain future conditions.

## Tracking Metrics

- Can include number of acres of Douglas-fir mortality addressed on USFS land and tracked by tons of fuel removed.

- Number of structures at Mt. Ashland Ski Area with adequate defensible space and hardening measures implemented, and number of acres of fuels reduction completed within the Mt. Ashland Ski Area footprint.

- Work with USFS partners on other tracking metrics specific to planning and adaptation actions.

## Monitoring Plan

- Track progress annually on identified metrics.

- Utilize existing monitoring data on city and other forestlands to inform planning and treatments as much as possible.

- Work with USFS partners to identify future monitoring needs.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

2025 Ashland Community Wildfire Protection Plan

## Landscape Resiliency Initiatives

**Challenge LR-1:** Recent tree die-off in the lower Ashland Watershed is increasing fire danger to the community, watershed and trails.

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| LR-1.1 | Work with the U.S. Forest Service to map and validate the extent and severity of tree mortality near Ashland's WUI and municipal watershed using Aerial Detection Survey data and ground verification. |
| LR-1.2 | Identify and prioritize the most urgent areas for intervention where tree mortality is significantly increasing wildfire risk. |
| LR-1.3 | Collaboratively develop a project plan that focuses on removing dead and dying trees, using expedited federal authorities and small-project environmental reviews to enable faster action. |
| LR-1.4 | Leverage strong community and City Council support for proactive climate adaptation to build momentum for treatment of adjacent USFS lands. |
| LR-1.5 | Seek funding opportunities and partnerships to implement treatments, including cost-sharing models similar to Phase One of the Ashland Forestlands Climate Change Adaptation Project. |
| LR-1.6 | Establish a monitoring program to track tree mortality trends and wildfire risk reduction progress, and adjust treatment plans as necessary. |

**Challenge LR-2:** Critical infrastructure and economic assets at the Mt. Ashland Ski Area are at significant risk of wildfire.

| | |
|---|---|
| LR-2.1 | Assess Vulnerabilities: Conduct a wildfire risk assessment for all Mt. Ashland Ski Area infrastructure, including lodges, lifts, communications installations, and utilities. |

2025 Ashland Community Wildfire Protection Plan

| LR-2.2 | Prioritize Assets: Identify and prioritize critical assets for structural hardening and defensible space improvements based on site risk. . |
| LR-2.3 | Develop Protection Plan: Create a wildfire mitigation plan focused on structural hardening, defensible space, and fuel management around ski area and communications infrastructure in conjunction with USFS and MAA partners. |
| LR-2.4 | Engage the USFS: Collaborate with the Rogue River-Siskiyou National Forest and Mt Ashland Association to expedite small-scale fuel reduction and protection projects under applicable federal guidelines. |
| LR-2.5 | Secure Funding: Identify and pursue federal, state, and private grant opportunities to fund wildfire resilience improvements at Mt. Ashland. |
| LR-2.6 | Implement Fuel Reduction: Initiate fuel reduction treatments, including thinning, pruning, and surface fuel removal, around key infrastructure and along primary access routes as appropriate. |
| LR-2.7 | Harden Structures: Retrofit key buildings and infrastructure with fire-resistant materials and features to minimize ignition risk. Ensure any new construction meets best practices for wildfire protection. |
| LR-2.8 | Establish Maintenance Protocols: Develop ongoing maintenance schedules for defensible space, structural inspections, and fuel reduction to ensure long-term resilience. |
| LR-2.9 | Community Engagement: Collaborate with local recreation, conservation, and economic groups to build public support and advocacy for wildfire protection efforts at Mt. Ashland. |

2025 Ashland Community Wildfire Protection Plan

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| **Challenge LR-3:** The changing climate threatens the ecological integrity of the Ashland Watershed and there is currently no plan to address this risk on federal lands as there is on city lands. | |
| LR-3.1 | Facilitate creation of a "climate-smart" plan for the entire Ashland Watershed. |
| LR-3.2 | Partner with the USFS to implement projects within Ashland's scope of authority. |

*Table 19: Landscape Resiliency Initiatives*

Section 13

# Response and Prevention

# Section 13: Response and Prevention

## Introduction

While Native Americans historically used fire to manage the local landscape, fire suppression has been a standard practice in Ashland since the mid-1800s. Today, proactive wildfire response and prevention efforts are vital because Ashland is a densely developed city with a population of over 3,200 people per square mile.

This chapter begins with a brief overview of the interagency wildfire response system. The focus then shifts to wildfire prevention in the built environment, recognizing that most modern wildfires are both unwanted and human caused.

## Wildfire Response and Mutual Aid

Oregon's wildfire response relies on coordinated mutual aid agreements at both county and state levels to ensure resources are available when emergencies exceed local capacity.

### County and Municipal Coordination

There is a mutual/automatic aid agreement between fire departments in Jackson and Josephine counties (Rogue Valley Fire Chiefs Association, 2010), whereas fire departments contribute apparatus, equipment, and personnel during major emergencies such as wildfires or structure fires. This ensures rapid resource mobilization across county lines. Local mutual aid agreements are also in place whereas AF&R and nearby fire departments provide additional resources to one another when needed.

### State-Level Support

The Oregon Fire Mutual Aid System (OFMAS) is a statewide program, which enhances local firefighting capacity by providing apparatus (i.e., engines), personnel, and resources through initiatives like Response Ready Oregon. Additionally, the Oregon Department of Emergency Management (ODEM) coordinates state resources to support counties and municipalities during major wildfire incidents.

# Wildfire Response in Ashland

Ashland Fire & Rescue (AF&R) collaborates with local, state, and federal agencies through the Rogue Valley Fire Chief's Association. These agencies follow "pre-programmed" wildfire response plans, coordinated by fire chiefs in Jackson and Josephine counties. The Oregon Department of Forestry and U.S. Forest Service also coordinate closely with local fire departments.

When local resources are overwhelmed, the Oregon State Fire Marshal's Office can request additional support from other counties or states. Ashland's proximity to the California border allows access to CAL FIRE resources if available.

Ashland Fire & Rescue has added personnel dedicated to medical response, freeing up firefighter/paramedics for wildfire response. AF&R also has personnel that are attached to Incident Management Teams (IMTs), which manage long-duration fires, rotating every two (2) weeks to ensure sustained coverage.

Additionally, the Medford Air Tanker Base services air tankers and helicopters, while the Ashland Airport serves as a helicopter base for incidents in the southern Rogue Valley.

## Limitations of Fire Suppression

While fire suppression is critical and effective in controlling most fires, extreme fire weather—like the conditions during the 2020 Almeda Fire—can overwhelm even the strongest firefighting efforts. Wind-driven fires, such as the recent Eaton and Palisades Fires in Los Angeles, demonstrate that no number of resources can fully contain fires under extreme conditions. Aircraft are often grounded in strong winds and rarely operate at night, further limiting suppression efforts.

While improving firefighting capacity is essential, communities like Ashland must also prioritize prevention and preparedness to reduce wildfire risk during extreme conditions.

# Local Wildfire Prevention

Ashland Fire & Rescue has been actively involved in wildfire prevention for many years, both within the community and in collaboration with regional agencies. Fire prevention focuses on reducing the sources of fires, regardless of their cause.

While many people view the city's weed abatement ordinance (City of Ashland, n.d.), which requires property owners to cut tall grass during the summer, as fire prevention, it's actually "mitigation". Cutting grass doesn't prevent fires from starting; instead, it reduces the intensity of a fire if one ignites. Both "prevention" and "mitigation" are equally important—and both are components of "risk reduction".

In Ashland, common causes of fires include cigarettes, cooking fires, campfires, machinery, and intentional acts. To reduce these risks, AF&R has implemented several fire prevention programs, including:

- Infrared drone monitoring of forested areas to detect illegal camping and potential fire starts.
- Regulations on fire and spark-emitting machinery use during fire season.
- Bans on backyard fire pits and appliances during High and Extreme fire danger periods.
- A fireworks ban to reduce ignition risks.
- Smokey Bear education campaigns in local schools.
- Fire danger rating signage throughout the city to inform residents and visitors of the current fire danger level.

These combined efforts aim to minimize the chances of wildfires starting and spreading in the Ashland area.

## The Unhoused Population

In the 2025 Point-in-Time (PIT) count study, approximately 10% of unsheltered residents were found to be living in wooded or open spaces, which are areas highly prone to wildfire ignitions (City of Ashland, 2025). These individuals face increased risk due to limited access to emergency alerts, remote living locations, and potential barriers to evacuation. Hearing and vision impairments, developmental disabilities, and mental health issues among the unhoused population further hinder their ability to receive emergency warnings.

Oregon has one of the highest rates of homelessness in the nation, ranking third after New York and Vermont (U.S. Department of Housing and Urban Development [HUD], 2023). The state also leads the

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country in unsheltered homeless youth and families, with forty-eight (48) individuals experiencing homelessness for every 10,000 Oregon residents (HUD, 2023).

Fire starts are not uncommon among the unhoused community, which end up threatening other members of the unhoused community, along with nearby structures and properties.

Unhoused individuals in Ashland face significant risks related to wildfire. Some of their activities pose a risk for ignitions, and transient unhoused individuals may be unaware of local fire dangers, camping restrictions, and wildfire safety, and are therefore more likely to unintentionally contribute to fire starts.

They are also affected by wildfire as a vulnerable population during these events. Tragically, the first presumed fatality in the 2020 Almeda Fire was an unidentified individual caught without warning in dense vegetation near the fire's origin, highlighting the extreme vulnerability of unhoused persons during wildfire events.

*"I am worried about the unhoused sleeping in the watershed and starting fires."*

-Ashland Resident

## Education and Prevention Opportunity

Clackamas and Deschutes counties have instituted a successful education and wildfire prevention program for the unhoused. These programs involve fire prevention personnel, medics, and law enforcement, who visit unhoused encampments to provide safety resources. Distributed items include:

- Portable fire extinguishers
- First aid kits
- Emergency ponchos/warming blankets
- Solar phone chargers and lanterns
- Sunscreen and ChapStick
- Buckets that can be filled with water to douse fires

Ashland's unhoused and transient residents cause wildfires (unintended or not) and are particularly vulnerable to the impacts from wildfire. Proactive measures are needed to improve education, fire prevention, and emergency preparedness.

## Hazards in Non-Forested, High-Risk Areas

Historically, the probability of a catastrophic wildfire in Ashland is not from within the forested areas alone, but from ignition and rapid fire spread originating in the grass-dominated lands adjacent to the city. These areas, including the Bear Creek Greenway and highway corridors stretching to Emigrant Lake, including lands that are nearly all privately owned, are highly vulnerable to human-caused ignitions leading to a fast-moving fire under dry and windy conditions like those on the day of the Almeda Fire.

The threat is most acute under extreme fire weather conditions driven by **Foehn winds** (dry, downslope wind events that come from the east), typically occurring in late summer and early fall. Historical examples, including the **2009 Siskiyou Fire** and the devastating **2020 Almeda Fire**, demonstrate the city's critical vulnerability to fires that start under these conditions and rapidly escalate into urban firestorms. The National Weather Service created a new category of weather warning, beyond a "Red Flag Warning" that historically indicated the highest level of fire conditions. The new warning is called a "Particularly Dangerous Situation".

The main risk from these types of fires is the speed at which they spread. Driven by higher-than-normal winds and low humidity that drive moisture from vegetation, the landscape becomes particularly susceptible to ignition and fire spread. In light and fast burning fuels like tall grass, fire can quickly outpace fire suppression, igniting structures that further stress firefighting resources, leading quickly to a situation where the priority is safety of life, which means focusing efforts on evacuation versus fire suppression. All of this played out during the Almeda Fire.

Knowing these conditions will surface in the future, a strategy needs to be developed to both increase the likelihood of successful fire suppression and to mitigate structures so fires don't take hold in the urban environment, leading to a conflagration. Strategies can include creating fuel breaks through mowing, grazing, and prescribed burning. It's important to note that the Almeda Fire

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ignited in a mowed field, yet it spread so rapidly that fire crews were unable to contain it. Of those three (3) methods of fuels reduction, only prescribed burning removes the fuel to the point that it won't burn, and then for only a limited period until vegetation regrows and fuels accumulate. Pilot projects are needed to evaluate the effectiveness of various fuels reduction methods in grassland settings adjacent to Ashland. A strategy to create ignition resistant structures is outlined extensively in the CWPP chapters on Paradigm Shift and Implementation.

Preventing the next catastrophic wildfire in Ashland requires a deliberate focus on the non-forested, high-risk ignition zones to the east of Ashland. By proactively managing fuels, preventing ignitions, hardening structures, strengthening partnerships, and enhancing emergency response, Ashland can meaningfully reduce the risk of devastation from "particularly dangerous" conditions that led to the Siskiyou and Almeda fires, and protect the future of the community.

## Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Response and Prevention Challenge Statements |
|---|
| **Challenge RP-1:** Unhoused community members face heightened wildfire risks and are also at risk of accidentally starting fires. |
| **Challenge RP-2:** Ashland's highest wildfire risk currently comes from ignitions and rapid fire spread in the non-forested lands surrounding the city. |

*Figure 49: Response and Prevention Challenge Statements*

## Baseline Conditions

- Unhoused individuals have not been consistently provided with fire prevention information or tools that could help them avoid accidental fire starts. No baseline data is available on how prepared unhoused people are to evacuate and on how best to enable them to be prepared and protect themselves.

- Causes of wildfires are tracked by AF&R and Jackson County. Most ignitions in Ashland are human-caused. While arson fires are uncommon, accidental fires particularly those started by unhoused persons are relatively common.

## Desired Conditions

- No wildfires are caused by the unhoused, 100% of the unhoused are signed up for emergency alerts when in Jackson County, 100% of the unhoused are using best-practices and appropriate tools to prevent accidental ignitions, and 100% of the unhoused protect themselves in some way from wildfire smoke inhalation.

- Prevent ignitions and reduce the potential for fast-moving, structure-threatening wildfires originating in non-forested, high-risk lands within and adjacent to Ashland.

## Tracking Metrics

- Number of wildfires caused by the unhoused or transient populations.

- Number of unhoused able to receive emergency alerts in Ashland each year.

- Number of unhoused using appropriate tools (e.g., buckets) to meet essential needs.

- Track treated and untreated acres of ignition-prone areas that are adjacent to the City of Ashland and wildfire risk reduction partnerships and collaborative activities taken on these properties.

## Monitoring Plan

- Track progress and report annually through partner agencies and organizations.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

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| Response and Prevention Initiatives | |
|---|---|
| **Challenge RP-1:** Unhoused community members face heightened wildfire risks and are also at risk of accidentally starting fires. | |
| RP-1.1 | Collaboratively create a plan to develop the means to engage the unhoused to be better prepared for the impacts of wildfire on their health and safety. |
| RP-1.2 | Provide training and resources for everyone who has contact with the unhoused to help them sign up for emergency alerts. |
| RP-1.3 | Collaborate with local partners and organizations that engage with the unhoused to design a wildfire prevention initiative based on the Clackamas and Deschutes County model that provides items to reduce ignition risk. Find funding to purchase materials and assemble items. |
| RP-1.4 | Implement a coordinated outreach campaign to improve the safety and well-being of the unhoused and deliver wildfire prevention messages and resources to the unhoused. |
| RP-1.5 | Collect data to document and validate efforts to engage the unhoused. Modify initiatives based on lessons learned. Consider leveraging the annual Point-in-Time Count program for data collection. |
| **Challenge RP-2:** Ashland's highest wildfire risk currently comes from ignitions and rapid fire spread in the non-forested lands surrounding the city. | |
| RP-2.1 | Conduct a fine-scale wildfire risk assessment for the Bear Creek Greenway, highways, and adjacent lands; map priority ignition zones near neighborhoods, schools, critical infrastructure, and high-fuel areas. |
| RP-2.2 | Implement strategic fuel breaks, defensible buffers, and low-flammability native plantings along highways, the Greenway, and private lands; partner with ODOT, |

| | | |
|---|---|---|
| | Jackson County, and private landowners to coordinate vegetation management and debris removal. |
| RP-2.3 | Phase in defensible space enforcement in fringe zones with education, incentives, and support for critical private parcels through cost-share or grant-funded programs. |
| RP-2.4 | Collaborate with transportation agencies to reduce roadside ignition risks; install fire-resistant barriers along high-risk corridors; enhance patrols, signage, and public alerts during Red Flag warnings and Foehn wind events. |
| RP-2.5 | Launch a citywide outreach campaign for adjacent private landowners; establish wildfire resilience partnerships among the city, nonprofits, businesses, and land managers to coordinate efforts across property lines. |
| RP-2.6 | Conduct scenario-based drills simulating rapid wildfire spread; pre-position suppression resources in ignition-prone zones during extreme fire weather periods. |
| RP-2.7 | Regularly monitor ignition-prone areas, vegetation conditions, and barrier effectiveness; adapt strategies based on evolving risk patterns and event after-action reviews. |

*Table 20: Response and Prevention Initiatives*

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Section 14

# Before Wildfire Strikes: Community Recovery Planning

# Section 14: Before Wildfire Strikes: Community Recovery Planning

*"...wildfires have massive economic and social consequences that can reverberate throughout impacted communities for years, disrupting housing, employment, and other aspects of social and economic infrastructure that support community health and wellbeing."*

(Moloney et al, 2023)

This section outlines a vision and key components for an Ashland-specific Wildfire Recovery Plan. It draws from the real-world impacts of large wildfires and the hard lessons learned by rural and urban communities that have faced catastrophic fire events. By applying these lessons, Ashland can take a proactive, inclusive, and well-informed approach to wildfire recovery planning before facing such a disaster. The information gathered for this chapter came from a multitude of sources.

## Introduction

The Almeda Fire, which ignited on September 8, 2020, in Ashland, devastated the neighboring communities of Talent and Phoenix, destroying over 2,500 homes and 600 businesses (Rogue Valley Council of Governments, n.d.). The loss of housing worsened Southern Oregon's housing crisis, causing the displacement of 8,500 people (Oregon Department of Land Conservation and Development, 2023). Among the hardest hit were 1,500 manufactured homes across eighteen (18) communities, disproportionately affecting socially vulnerable populations (CASA of Oregon, 2022). The Superintendent of the Phoenix-Talent School District reported that about 700 children (~30% of the student population) lost their homes (Barry, 2020).

Infrastructure damage significantly slowed recovery efforts due to compromised roads, sewer, and water systems. The Bear Creek Greenway, a key multi-use path and urban park, also suffered

extensive damage, affecting recreational interests and the local ecosystem (Jefferson Public Radio, 2021).

Over four (4) years later, the local economy still struggles to recover, with widespread business losses, job instability, and disrupted services, leaving many residents grappling with long-term physical and mental health challenges.

In the aftermath of the 2020 wildfires, community-driven organizations quickly mobilized to aid recovery. A key lesson learned was that communities with pre-established networks of organizations were better equipped for disaster response. These networks enabled a faster, more coordinated, and equitable recovery, enabling longer-term support for those affected.

Wildfire recovery is a long, complex process beyond rebuilding homes. Anticipating emotional recovery needs and implementing coordinated efforts can prevent delays, revenue loss, and prolonged disillusionment, strengthening long-term resilience. Effective recovery requires strong community engagements before, during, and after a wildfire disaster. To be fair and equitable, the effort requires ongoing investments in interorganizational collaboration and strategic planning to restore essential systems and support for affected populations and businesses. Proactive measures can significantly influence a business' ability to withstand and recover from catastrophic events.

# Research Findings

Since the 1991 Oakland Hills Fire in California, extensive research and case studies have underscored the importance of proactive wildfire recovery planning. Lessons from past wildfires highlight the significance of community engagement and collaboration in recovery efforts. Fostering strong interorganizational relationships before the fire are critical components of effective wildfire recovery. Proactive measures not only aid in immediate recovery but also contribute to long-term resilience against future wildfire events (U.S. Fire Administration, 1998).

## Emotional Phases of the Recovery Process

It's critical to understand the deep and lasting impact of a disaster on mental health, which not only affects people's wellbeing, but can also be a factor in survivors' decisions to leave the community. Five (5) years after the Camp Fire in Paradise, CA, over 68% of people had not returned (First Street,

2025). To help understand the depth of this issue, authors Zunin and Myers (2000) describe the emotional phases of disaster recovery progressing from pre-disaster anxiety to heroic community action, followed by a honeymoon phase of optimism, then disillusionment as challenges arise, and finally long-term reconstruction as individuals and communities rebuild and adapt (DeWolfe, 2000) (Figure 50).

Understanding these phases can aid in anticipating community needs and implementing appropriate support mechanisms throughout the disaster recovery process.
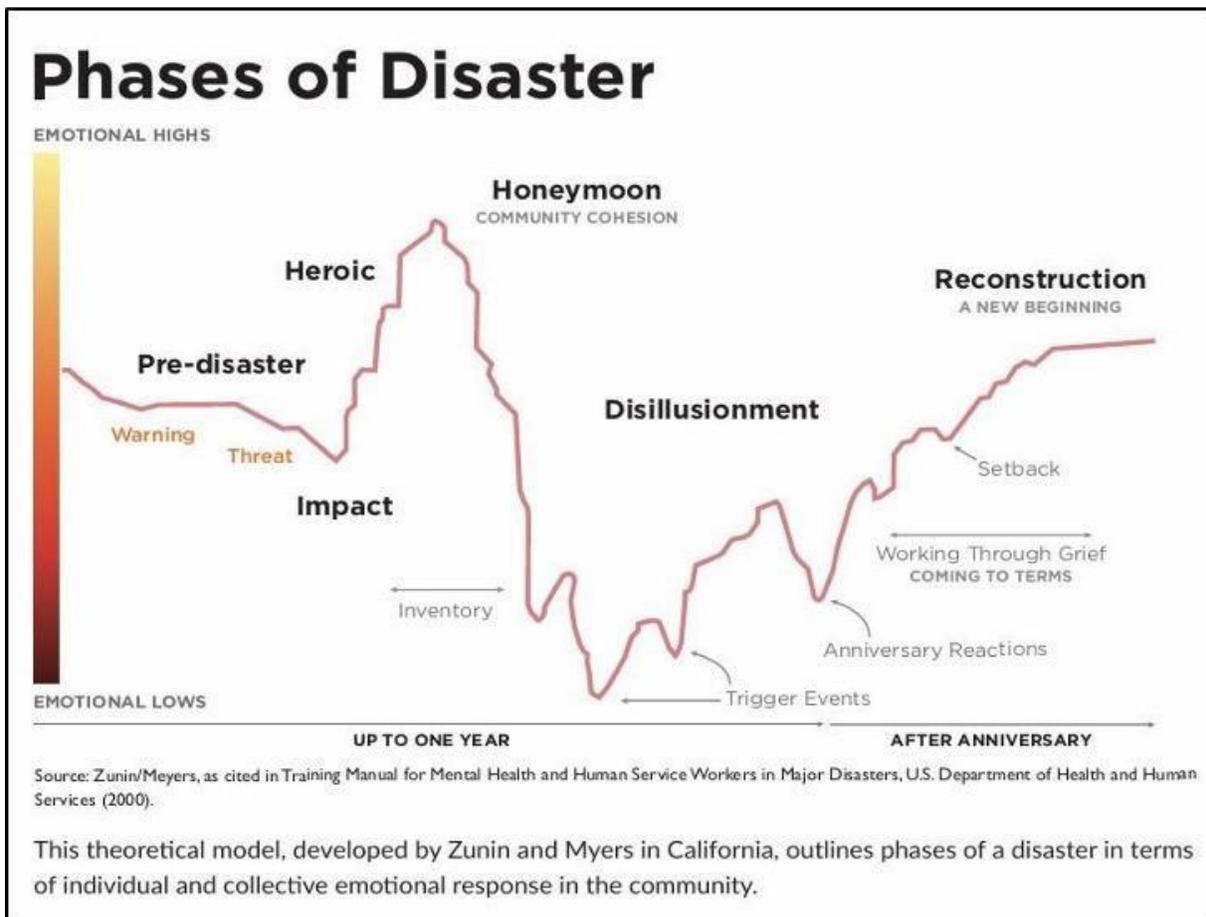


*Figure 50: Phases of a Disaster Graphic, Zunin and Myers in DeWolfe (2000)*

*"I'm lucky, blessed, whatever you want to call it. But I know from looking at Craigslist that in the past when I was desperate for housing that it's really, really hard to find affordable housing here."*

-Participant Jackson County Community Needs Assessment Participant, 2022

# Fairness and Equity in the Recovery Process

Research shows that without deliberate attention to fairness and equity, community recovery efforts can unintentionally leave behind vulnerable groups. Key dimensions include the following aspects:

- Economic (e.g., housing and finance)
- Social (e.g., health, education, community cohesion)
- Environmental (e.g., land and infrastructure restoration)
- Policy (e.g., governance and resource distribution)

A summary of issues and some recommendations to promote equitable recovery follow:

1. **Disparities Across Economic, Social, Environmental, and Policy Dimensions**

- **Economic Inequities:** Lower-income households, renters, and uninsured homeowners face greater challenges in rebuilding, often experiencing slower or incomplete recovery (Hamideh et al., 2022; Urban Institute (aka Rumbach et al., 2023a).

- **Social Vulnerabilities:** Access to healthcare, education, and mental health services significantly affects recovery outcomes, particularly for elderly residents, children, and marginalized groups (Hamideh et al., 2022; Hess et al., 2023).

- **Environmental Justice:** Post-fire cleanup and mitigation efforts can disproportionately impact disadvantaged communities, particularly regarding toxic debris management (Environmental Health News [EHN], 2023).

- **Policy and Bureaucracy:** Delays in government aid and complex application processes tend to benefit wealthier, better-resourced communities while leaving smaller, rural, and marginalized populations behind (Government Accountability Office [GAO], 2024; Center for Climate and Energy Solutions [C2ES], 2021).

2. **Policy Recommendations to Improve Equity**

- **Pre-Disaster Planning:** Integrating equity into emergency response frameworks can mitigate post-disaster disparities (Moloney et al., 2023).

- **Targeted Assistance:** Prioritizing aid distribution to the most vulnerable groups ensures more balanced recovery outcomes (FEMA, 2022; GAO, 2024).

- **Better Data Collection:** Using geographic, demographic, and socio-economic tracking of recovery progress can help policymakers adjust support where needed (Thomas et al., 2022).

3. **Best Practices for More Equitable Recovery**

- **Language Accessibility:** Implementing comprehensive language access services—including translation of materials and provision of interpreters—ensures that individuals with limited English proficiency can fully participate in recovery efforts and access essential services. (FEMA, 2020 and 2023).

- **Housing and Financial Assistance:** Policies such as grants for rebuilding, affordable housing programs, and flexible aid reduce disparities in who can return and rebuild (FEMA, 2022; GAO, 2024).

- **Community-Centered Planning:** Actively engaging marginalized residents in recovery meetings ensures their needs are addressed (Urban Institute – aka Rumbach et al., 2023a).

- **Streamlined Government Aid:** Reducing administrative burdens, providing upfront funding, and simplifying grant applications to help underserved communities access support (GAO, 2024).

- **Environmental Considerations:** Fair debris removal policies and transparent communication prevent additional harm to vulnerable neighborhoods (EHN, 2023).

- **Health and Education as Anchors:** Prioritizing the restoration of schools and healthcare facilities supports long-term recovery by stabilizing communities (Hamideh et al., 2022; Hess et al., 2023).

4. **Measurable Indicators Can Help Track Recovery and Equity**

- **Housing Reconstruction Progress:** Percentage of homes rebuilt or repaired post-disaster, with a focus on income and tenure disparities (Urban Institute, 2023b).

- **Displacement and Return Rates:** Who can return and when, particularly comparing renters vs. homeowners and lower-income vs. higher-income groups (Urban Institute 2023a (aka Rumbach et al., 2023a)).

- **Housing Affordability Post-Fire:** Tracking rent increases and home prices to determine which survivors are priced out (Urban Institute, 2023a); or percentage of a community's population paying in excess of 30% and 50% of their income on housing.

- **Insurance Coverage Adequacy:** Identifying underinsurance gaps, as lower-income households often struggle with rebuilding costs (Urban Institute, 2023b).

- **Restoration of Critical Services:** Measuring the speed of reopening schools, healthcare facilities, and infrastructure to assess community-wide recovery (Hamideh et al., 2022; Federal Emergency Management Agency [FEMA], 2022).

- **Mental Health and Well-being:** Tracking PTSD prevalence and access to psychological support services (Hess et al., 2023; Moloney et al., 2023).

- **Public Engagement in Recovery Planning:** Ensuring participation is representative of all affected populations (Urban Institute, 2023a, -- aka Rumbach et al., 2023a).

- **Distribution of Recovery Funds:** Monitoring how government and charitable funds are allocated to ensure equitable support (Center for Climate and Energy Solutions [C2ES], 2021; GAO, 2024).

# Other Considerations

## Economic Recovery

Disasters significantly impact small businesses, with nearly half (43%) failing to reopen and an additional 29% closing within two (2) years. Preparedness plays a crucial role in recovery; businesses with resumption plans resume operations more swiftly than those without disaster preparedness plans. The development of resumption plans and awareness of available financial assistance after a disaster, is vital for small business resilience (Federal Emergency Management [FEMA], 2018).

## Environmental Recovery

Best practices for watershed recovery can be gleaned from work done by the Rogue River Watershed Council, Lomakatsi Restoration Project, and Jackson County in the aftermath of the Almeda Fire along the tributaries and main stem of Bear Creek.

For the Ashland Creek Watershed, should a fire impact U.S. Forest Service lands, a Burned Area Emergency Response (BAER) team and response protocol would be initiated by the Rogue River-Siskiyou National Forest. The City of Ashland would follow the BAER recommendations on adjacent municipal lands in the lower Ashland Watershed.

# National Guidance and Resources

Many resources are readily available to assist with wildfire recovery and wildfire recovery preplanning. Some of these resources are listed here.

## Federal Emergency Management Agency (FEMA)

The Federal Emergency Management Agency (FEMA, 2024) offers a comprehensive resource titled "Long-Term Community Recovery Planning Process: A Self-Help Guide," designed to assist local stakeholders in post-disaster recovery planning. This guide provides direction for developing strategic plans to restore and revitalize community health, social, economic, natural, and environmental systems following a disaster. It emphasizes the importance of a flexible and unified structure, promoting collaboration among federal, state, local, tribal, and territorial governments, as well as private sector partners, to address the diverse needs of affected populations. The guide also highlights the significance of integrating resilience and sustainable recovery planning to strengthen communities against future disasters.

## Fire Adapted Communities Learning Network (FAC Net)

FAC Net offers guidance on wildfire recovery planning, emphasizing the importance of proactive, community-based strategies. Key recommendations include:

- **Pre-Fire Planning:** FAC Net underscores the necessity of developing recovery plans before wildfires occur. This involves engaging diverse community members to create inclusive

strategies that address potential post-fire challenges, thereby enhancing ecological resilience and expediting recovery efforts.

- **Collaborative Frameworks:** The network advocates for the establishment of collaborative groups, which unite local agencies, organizations, and residents. These partnerships facilitate coordinated recovery actions and ensure that all community sectors are represented in decision-making processes.
- **Utilization of Visual Tools:** FAC Net has developed a visual tool and guide to facilitate post-fire recovery planning.

# Local Advice and Resources

Ashland is in the Rogue Valley, which has many dedicated organizations committed to making it easier for communities to recover from disasters. A brief description is presented here.

## Jackson County Community Long-Term Recovery Group (JCC LTRG)

Long-Term Recovery Groups (LTRGs) are a nationally recognized best practice recommended by the Federal Emergency Management Agency (FEMA) for post-disaster recovery. LTRGs exist across Oregon and the country, supporting local communities in rebuilding efforts after federally declared disasters. When a disaster strikes, an LTRG convenes community-based organizations, government entities, faith-based groups, developers, business owners, and others working with disaster survivors to coordinate recovery and rebuilding. Long-term recovery—the process of restoring a community—can last three to ten years depending on the disaster's scope.

The mission of the Jackson County Community Long-Term Recovery Group (JCC LTRG) is to assist disaster survivors in Jackson County in recovering and rebuilding their lives. Established after the 2020 Almeda and South Obenchain fires, JCC LTRG aims to unite recovery resources with community needs, ensuring that even the most vulnerable survivors can achieve a new sense of normalcy. The organization used the FEMA *Long-Term Community Recovery Planning Process: A Self-Help Guide* (updated in March 2025) to analyze needs and determine short- and long-term goals for community recovery, rebuilding, and resilience. In 2023, they collaboratively facilitated "Rogue Reimagined," a community-led planning process to create a resilient Rogue Valley and carry momentum of past recovery efforts forward into the future.

The "Rogue Reimagined: Regional Long-Term Recovery Plan," serves as a comprehensive roadmap for post-wildfire recovery in Jackson County. This plan emphasizes community collaboration, integrating input from residents, state and local partners. A central feature of the plan is the identification of twenty-one (21) recovery projects, each managed collaboratively by community organizations and local governments, with designated project leads to ensure effective implementation. These projects are designed to address various aspects of recovery, including housing, infrastructure, economic revitalization, and environmental restoration, aiming to rebuild a more resilient and connected community.

The plan also highlights the importance of learning from other disaster-affected communities, recognizing that such initiatives can significantly improve recovery outcomes for both survivors and the broader community. By outlining clear guidelines and actionable steps, "Rogue Reimagined" provides a structured approach to rebuilding and reimagining the community, ensuring that recovery efforts are both effective and equitable.

## Rogue Valley Community Organizations Active in Disaster (RV COAD)

The **RV COAD** is a program of the Jackson County Community Long Term Recovery Group (JCC LTRG), which coordinates with local government agencies to support an organized, collaborative response to and recovery from disasters. JCC LTRG works in partnership with nonprofit, faith-based, and community organizations, as well as individual volunteers, to coordinate local recovery efforts aligned with FEMA's long-term recovery framework. The COAD focuses on addressing unmet needs and advancing equitable support for fire-impacted communities across Jackson County.

## Firebrand Resiliency Collective (FRC)

The FRC, a local not-for-profit, is dedicated to fostering community-driven solutions for long-term recovery, resilience, and preparedness in the face of natural disasters. Their mission emphasizes the importance of empowering local communities to collaboratively address and mitigate the impacts of such events (Firebrand Resiliency Collective, n.d.). The FRC has a wealth of experience building a wildfire recovery process from the ground up and has developed a helpful collection of documents to advise and assist community members during the recovery process.

This grassroots organization figured out what to do to help Almeda Fire victims through engaging affected community members and experimentation and have shared what they learned with the Ashland CWPP Project Team.

## Rogue Food Unites

Based in Ashland, Rogue Food Unites was literally born from the ashes of the Almeda Fire. Their mission: Rogue Food Unites (RFU) uses food to heal individuals and communities during times of crisis.  RFU coordinates with locally invested food businesses to provide fresh, nutritious, and shelf-stable ingredients, assembled and delivered to our communities. While meeting the fundamental human right for food, RFU strengthens local economies, fostering collaboration, preserving jobs for residents, building resilience, and ensuring food security and sovereignty in Oregon.

RFU is looking forward to their growing role in the local emergency response and management community. They have a physical space in Ashland near Southern Oregon University with kitchen, refrigeration, office, and storage space that would be open to the community in a time of need.

RFU is working to improve resiliency at their facility. They've acquired grants from the American Red Cross and State of Oregon to improve their communications and energy independence, allowing them to continue operations independent of the normal, everyday power and communications grids. RFU is seeking funding to create backup power for their refrigeration units, ideally in partnership with the neighboring Market of Choice grocery store.

RFU has a Memorandum of Understanding with the local American Red Cross to provide food for disaster survivors. Part of a developing strategy is to increase production of freeze-dried foods from Oregon producers that will be shelf-stable for up to twenty (20) years.

RFU is looking to supply state resources across Oregon and build regional storage centers where freeze-dried food can be staged for distribution. A developing partner in Ashland is a newer business called Heather's Choice, who specializes in dehydrated foods. In addition to food stockpiles for disaster response, RFU supplies meat and produce to 600 people a day for three (3) days each week through their farmers markets and are currently the largest purchaser of produce in the Rogue Valley.

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Aside from food, RFU is providing bilingual support for ongoing resource navigation and support for post-2020 wildfire recovery families in Josephine, Jackson, and Klamath Counties. RFU is a willing and eager partner in the Ashland community with the shared goal of making communities, including Ashland, better prepared for disasters. They have a trained staff and actively solicit grant funding and donations for their programs.

## American Red Cross (ARC)

The ARC has been actively enhancing wildfire resilience in the Rogue Valley, particularly following the Almeda Fire. In August 2023, the American Red Cross launched the Community Adaptation Program (CAP) in Jackson County, aiming to bolster community resilience by partnering with local nonprofits. CAP focuses on providing training, equipment, materials, volunteer support, and funding to grassroots organizations addressing basic needs in disaster-prone areas. For instance, a grant was awarded to Rogue Food Unites to establish an independent power system, ensuring continued food distribution during power outages. Similarly, collaboration with Talent Maker City facilitated the construction of over 100 beds for residents displaced by wildfires and the installation of a solar charging station for community use. These initiatives exemplify the Red Cross's commitment to fostering local partnerships that enhance disaster preparedness and recovery efforts in the Rogue Valley.

By leveraging national guidance and resources, community-based strategies, and local service organizations, Ashland is well positioned to collaboratively create an equitable and effective wildfire recovery plan.

# Preplanning Considerations

There are a multitude of preplanning considerations which will be introduced here.

## Creating a Pre-Disaster Wildfire Recovery Plan

Establish clear roles, responsibilities, and actions by taking the following steps:

- Agree on plan goals, objectives, desired outcomes, and content.
- Assign a facilitator to bring partners, resources, and city staff together.

- Review information identified in the findings section of this chapter and other sources.

- Hire a writer to sort through available information, interview local organizations and knowledgeable individuals, and draft the plan.

- Submit the plan to the public and authorities for review and approval.

- Update the plan when needed (at least every five years).

## Before a Wildfire (Preparedness & Capacity Building)

- **Build Interagency and Community Partnerships** – Strengthen coordination between local government, emergency services, nonprofits, and residents.

- **Secure Funding and Resources in Advance** – Identify and apply for grants, create emergency funds, and pre-establish aid programs.

- **Conduct Community Education and Training** – Inform residents and businesses about preparedness, insurance, and evacuation procedures.

- **Enhance Infrastructure Resilience** – Improve fire-resistant building codes, defensible spaces, and critical infrastructure protections.

- **Preplan for Re-entry** - Develop clear protocols for safe return after evacuation, including damage assessments, public communication, and support services.

## During a Wildfire (Immediate Response & Resource Deployment)

- Activate Emergency Coordination Centers – Covered in Section 4.

- Assess Immediate Damage and Needs – Deploy rapid damage assessment teams to inform response and aid distribution.

- Support Evacuees and At-Risk Populations – Establish temporary shelters, medical support, and financial aid for displaced residents.

- Maintain a Contractor Contact List – Including mental health professionals, who will be critical resources during the recovery process.

- Begin Data Collection for Recovery Efforts – Document impacts for insurance claims, federal aid applications, and future planning.

- Communicate Clearly with the Public – Provide timely updates on fire progression, safety measures, and available assistance.

## After a Wildfire (Long-Term Recovery & Resilience)

- **Implement Housing and Infrastructure Recovery Programs** – Fast-track rebuilding permits, offer financial assistance, and prioritize affordable housing.

- **Provide Economic Support for Affected Businesses** – Offer grants, low-interest loans, and technical support for reopening businesses.

- **Address Mental Health and Social Service's Needs** – Ensure long-term access to trauma recovery, counseling, and community support programs.

- **Enhance Future Disaster Preparedness** – Update wildfire response and recovery plans based on lessons learned.

- **Monitor and Restore the Environment** – Rehabilitate burned landscapes, improve watershed protection, and invest in sustainable land management.

# Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Recovery Planning Challenge Statements |
| --- |
| **Challenge RC-1:** Wildfire recovery can be slow, painful, unfair, and expensive, but proactive planning can significantly ease the process. |
| **Challenge RC-2:** Ashland lacks the capacity, personnel, and funding to effectively preplan and deal with the devastation from a catastrophic wildfire. |
| **Challenge RC -3:** Wildfires can cause severe, lasting damage to streams and watersheds, triggering landslides and heavy sedimentation that can impact the city's potable water supply. |

*Figure 51: Recovery Planning Challenge Statements*

## Baseline Conditions

- Ashland has a plan and funding strategy to relocate the city's Water Treatment Plant to mitigate risks from wildfires, floods, landslides, and earthquakes.

- Ashland's Electric Department has a plan focusing on maintaining a safe and reliable electric system during emergencies.

- Jackson County updated its Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP) in 2024, which will be effective until February 2029. The plan identifies critical infrastructure countywide.

- Oregon Housing and Community Services (OHCS) launched the ReOregon program after the 2020 wildfires. This initiative provides financial assistance for rebuilding housing, repairing infrastructure, and revitalizing local economies in affected areas.

- The RV COAD acts as the Jackson and Josephine Counties' coordinating organization with local government agencies toward an organized, collaborative response to and recovery from disaster by NGO, faith-based, community organizations and individuals. The Ashland Community Emergency Response Team (CERT) program educates residents about disaster preparedness and trains them in basic response skills, including fire safety, light search and rescue, team organization, and medical operations.

## Desired Conditions

- Creation of an Ashland Wildfire Recovery Preplan which clearly addresses community needs before, during and after a wildfire; identifies what needs to be done immediately after the fire (0-30 days)—including an evacuation re-entry plan short-term (1-6 months), and long-term (6+ months); engages partners and citizens; prescribes activities that are fair and equitable, providing guidance to the "whole community", including residents, businesses, and major institutions; draws heavily on local experience, research studies, and best practices; and identifies available funds to implement the plan and track identified metrics.

## Tracking Metrics

- A current wildfire recovery plan is available.

- Number of highly valued "wildfire recovery" resources and assets (see appendices) at low risk because of proactive risk reduction actions taken.

- Restoration of services - measure the time taken to restore power, water, schools, parks, and healthcare.

- School closed days, reopening provisions, and re-enrollment rates.

- Public engagement in recovery planning.

- Housing losses and reconstruction in progress.

- Displacement and return rates.

- Housing affordability post-fire.

- Insurance coverage adequacy.

- Distribution of recovery funds.

## Monitoring Plan

- The plan should identify how the above metrics will be monitored and include demographic indicators to identify recovery gaps and inform policies to ensure no demographic group is left behind.

- Progress should be reported on the CWPP dashboard.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the [appendices.](#) Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

| Recovery Planning Initiatives | |
|---|---|
| **Challenge RC-1:** Wildfire recovery can be slow, painful, unfair, and expensive, but proactive planning can significantly ease the process. | |
| RC-1.1 | Collaboratively draft an inclusive Pre-Disaster Wildfire Recovery Plan by leveraging partners, mining information from this CWPP and local surveys, and integrating lessons learned from other communities. |

| Challenge RC-2: Ashland lacks the capacity, personnel, and funding to effectively preplan and deal with the devastation from a catastrophic wildfire. ||
|---|---|
| RC-2.1 | Survey all institutions and businesses that operate in Ashland to develop an inventory of who has adequate emergency operations and or business resumption plans. |
| RC-2.2 | In anticipation of a major reduction in affordable housing, convene a working group to look at the existing baseline and develop and implement a proactive plan to address the potential for loss of even more affordable housing. |
| RC-2.3 | Draft an Ashland Business Recovery Plan based on best practices adopted by other communities. |
| RC-2.4 | Prepare businesses to support wildfire recovery focusing on displaced household needs. |
| RC-2.5 | Discuss and develop joint plans and funding strategies with non-governmental organizations (NGOs) for disaster response. |
| Challenge RC-3: Wildfires can cause severe, lasting damage to streams and watersheds, triggering landslides and heavy sedimentation that can impact the city's potable water supply. ||
| RC-3.1 | Preplan Burned Area Emergency Response with partners to enable rapid landslide and erosion mitigation after wildfire |

*Table 21: Recovery Planning Initiatives*

# Implementation Blueprint

# Section 15: Implementation Blueprint

## Introduction

To protect Ashland from wildfire devastation, the community must become a **fuel break—not a fuel source**. By resisting ember attacks and slowing the spread of fire, our homes, businesses, and surrounding landscapes can help interrupt wildfire advancement and improve survival outcomes.

> *"We must recognize that our communities were developed in a climate and environment that no longer exist. We have the tools and knowledge to reduce community wildfire risks. But we must address the profound and deeply rooted misalignment of political and social expectations regarding what it means to live with wildfire. Now is the time to invest in long-term, economically efficient solutions, rather than short-term, risk-averse tactics. We have to live with wildland fire. We don't have to live with fire in our communities."*
>
> (Calkin, et al., 2023)

Achieving this transformation requires a clear blueprint for action, which is outlined in this final section. Our shared vision for Ashland's future in the Executive Summary and five (5) overarching goals reiterated in this section are entirely attainable. Yes, it will take individual and collective effort, require investment, and will result in significant changes. With so much at stake, it's not a question of whether we can succeed, but how quickly and effectively we can act.

To guide the way, this plan identifies many challenges, describes current and desired conditions, and proposes a comprehensive suite of activities (called initiatives) designed to overcome obstacles and drive real change.

This blueprint offers a path forward. It offers opportunities to share the workload and coordinate action. The blueprint can be regularly reviewed and adapted as needed to stay focused, flexible, and accountable.

Success will require more than just a good plan. The City of Ashland alone does not have the capacity to implement this CWPP. Meaningful progress depends on four critical ingredients:

- Strong community buy-in
- A coordinating body to facilitate collaborative implementation
- A trained workforce
- Substantial, sustained funding

This is more than a plan, it's a call to action, a roadmap to resilience, and a promise to future generations that we chose to protect and preserve Ashland.



*Figure 52: Photo Courtesy of Charrisse Sydoriak*

Ashland has the experience, vision, and proven ability to meet tough challenges. A powerful example is the city's long-standing commitment to wildfire risk reduction and forest stewardship. In 2013, Ashland added a small fee to all water bills to create a dedicated local funding source. Over the next decade, this modest investment—about $1.2 million—unlocked more than $33 million in federal, state, and private funding. It enabled the city and AFR Project partners to meet critical cost-share requirements and build strong partnerships with the U.S. Forest Service, dramatically advancing forest resiliency and fuels reduction work. A similar local investment strategy today would empower Ashland to implement the bold initiatives outlined in this CWPP—and protect our community for generations to come. We co-created a new model of forest stewardship, now we need to change how communities prepare for wildfire.

# Blueprint for Action

Achieving Ashland's wildfire resilience goals will take more than technical solutions—it will require broad, sustained community involvement. Each household, business, organization, and institution has an important role to play in strengthening the city's wildfire preparedness. Because this task is complex, creating a clear action plan is not simple. To help explain it, we use a familiar analogy: building a home.

The **Five Goals** listed below are the foundation of this "home." Each goal acts like a pillar, helping hold up the entire structure. Attached to each pillar are **Key Results**—high-level objectives that show what needs to happen to make the structure strong and complete. Think of them as the major features of the home that allow the whole community to exist safely under one roof.

**Challenges** are like the obstacles and limitations we have to work around when designing a complex house. In this CWPP, about 40 challenges have been identified, meaning our "home" must be large, adaptable, and thoughtfully designed. Each challenge has been assigned a code to facilitate tracking. The table below should facilitate moving quickly between plan sections to find challenge categories and initiatives of interest.

## Navigation Guide

| Section | Challenge ID | Section | Challenge ID |
|---------|-------------|---------|-------------|
| Community Risk | CR | Paradigm Shift | PS |
| Health and Safety | HS | Codes & Ordinances | CO |
| Residential Risk | RR | Landscape Resilience | LR |
| Renter's Preparedness | RE | Response & Prevention | RP |
| Socially Vulnerable People | SV | Wildfire Recovery Planning | RC |
| Insurance Crisis | IN | Implementation | IM |
| Economic Stability | ES | | |

*Table 22: Blueprint Navigation Guide*

**Initiatives** (or action steps) are similar to detailed construction drawings; the blueprint we use to turn our vision into reality. Before building, we must assess the site, gather resources, and assemble a skilled work crew. As construction moves forward, we can expect to encounter setbacks and make discoveries that necessitate adjustments.

Every initiative is nested under a challenge statement and has an assigned number. For a complete list of initiatives, refer to the appendices.

| Our Goals |
|---|
| **Inspire and mobilize** the Ashland community through trust, shared leadership, and open dialogue to achieve 90% risk reduction in 10 years. |
| **Harden Ashland's valued resources and assets (HVRAs)** to wildfire through data-informed strategic planning and risk assessments. Monitor and report progress. |
| Revise **municipal codes** to align with the 90% risk reduction goal by integrating clear compliance timelines and financial assistance for eligible populations. |
| Establish a **reliable city funding mechanism** and build core capacity to partner, secure, manage, and match essential risk reduction resources. |
| Secure an average of **$8 million annually for 10 years** to enable sustainable plan implementation. |

*Figure 53: Goals*

## Key Results Desired for Each Goal (Framework)

The key results and action steps that follow are a call for collective action. By working together, we can protect lives, homes, the local economy, and the natural and cultural resources that define Ashland.

All actions identified should be accomplished in a manner that is equitable and clear to most members of the community. Whether it's a renter learning evacuation protocols, a business owner

retrofitting their storefront, or a neighborhood organizing a cleanup day, each step contributes to a safer Ashland. These efforts will be tracked, evaluated, and celebrated—ensuring we maintain momentum and adjust strategies as needed to stay on course.

## Goal 1: Stronger Together, Safer Forever

Inspire and mobilize the Ashland community through trust, shared leadership, and open dialogue to achieve 90% risk reduction in ten (10) years.

| Key Results (Measurable Objectives) | Challenges | When | Cost |
|---|---|---|---|
| Leadership: City Council approves the CWPP and establishes base level funding to sustainably implement. | PS-1, 2 & 3 | FY26-FY36 | $ |
| Public Engagement: Based on survey data, 90% of residents and business in Ashland understand the need for action; at least 50% are taking action by 2030; and 75% by 2036. | PS-1, 2 & 3; RR-1, RE-2; SV-1 & 2 | FY26-FY36 | $ |
| Communications: Develop a CWPP progress tracking platform to inspire and motivate the community. | CR-1; RR-1; SV-1 | FY26 | $ |
| Partners: Leverage diverse partnerships to enable effective outreach and risk reduction. | RR-4; PS-1, 2 & 3 | FY26 & ongoing | $ |

*Table 23: Key Results Goal 1*

## Goal 2: Strengthen What Matters, Track What Counts

Harden Ashland's valued resources and assets (HVRAs) against wildfire through data-informed strategic planning and risk assessments. Monitor progress.

| Key Results (Measurable Objectives) | Challenges | When | Cost |
|---|---|---|---|
| Assess Risks: Periodically reassess wildfire hazards and risks across space and time. | CR-1 | FY26 | $ |
| Scoring HVRAs: Evaluate wildfire potential for all HVRAs, populate the HVRA table, and document scoring methods. | CR-4; PS-1, 2 & 3; IM-1 | FY26 | $ |
| Strategize: Develop a risk reduction strategy based on HVRA scores, taking into account fire behavior. | CR-1 & 4, IM-1 | FY26 | $ |
| Prioritize: Assess the extent of high-risk non-forest wildlands that need to be treated. | CR-1 & 4; IM-1 | FY26–FY27 | $ |
| Report Changes: Build a system to monitor, analyze, and publicly share wildfire risk reduction progress. | All | Ongoing | $$ |

*Table 24: Key Results Goal 2*

## Goal 3: Smart Standards, Big Results

Revise municipal codes to align with best practices to achieve the 90% risk reduction goal.

| Key Results (Measurable Objectives) | Challenges | When | Cost |
|---|---|---|---|
| Prevent Ignitions: Use education and tools to minimize unhoused person-caused ignitions. | PR-1 | Ongoing | $ |
| County-Wildland Hazards: Engage Jackson County to promote coordinated non-forested wildlands risk reduction within 10 miles of the city. | PR-2 | FY26-FY36 | $$ |

| | | | |
|---|---|---|---|
| Pass Improved Wildfire Mitigation Codes: Adopt necessary and enforceable vegetation management and structural hardening codes. | PS-1; RR-5, CO-3,4 | FY27 | $ |
| Inspection Capacity: Build inspection capacity to enable timely and consistent application of regulations. | PS-1; RR-5; CO-3 | FY26 | $$ |
| Phasing: Phase in regulations, allowing ~3 years for owners to comply, prioritizing compliance for strategically important areas. | RR-5; CO-1, 2, 3, & 4 | FY26–FY29 | $$ |
| Early Adoption: Promote voluntary compliance with IBHS Wildfire Prepared Home standards and connect to insurance crisis. | CO-3 & IN-1 | Ongoing | $ |
| Revise HOA CC&Rs: to align with wildfire safety best practices by 2030. | CO-4 | FY26-FY30 | $ |
| Implement: Establish clear administrative compliance timelines. | CR-1; IM-1 | FY27–FY30 | $$$ |
| Support Options: Develop financial assistance opportunities for eligible populations. | PS-2; RR-2 & 3; R-1; SV-1, 2, & 3 | Ongoing | $$$ |
| Monitor Effectiveness: Adapt regulations based on feedback, compliance tracking, and evolving risk. | PS-1, 2, & 3; RR-5; CO-1, 2, 3, & 4 | Ongoing | $ |

*Table 25: Key Results Goal 3*

## Goal 4: Strengthen Our Core, Fund the Mission

Establish a reliable city funding mechanism and build core capacity to partner, secure, manage, and match resources essential for advancing wildfire risk reduction.

| Key Results (Measurable Objectives) | Challenges | When | Cost |
|---|---|---|---|
| Appropriate Funding: Adopt an appropriate wildfire risk reduction fee that would provide for existing staffing, ongoing forest stewardship, and base funding for CWPP implementation. | IM–2; LR–1, 2, & 3 | FY26 | $$$ |
| City Inspector: Fund a wildfire mitigation inspector to enforce risk reduction regulations. | CO–3 | FY26 | $$ |
| Workload Management: Establish a fiscally sponsored collaborative or independent NGO to share operational responsibility with the city to exponentially improve capacity. | PS–1, 2 & 3; IM–1, 2 & 3 | FY26–FY36 | $$$ |
| Matching $: Maximize matching dollars to meet funding cost-share requirements. | CR–4; PS–2 | FY26–FY36 | $ |
| Donations: Create or align with existing charitable foundations to accept donations for wildfire risk reduction projects. | PS–2 | FY26–FY36 | $ |
| External Grants: Continuously apply for and manage federal and state hazard mitigation grants. | IM–1, 2, & 3 | FY26–FY36 | $$ |

*Table 26: Key Results Goal 4*

## Goal 5: Meaningful Work, Massive Impact

Secure an average of $8 million annually for 10 years to enable sustainable plan implementation.

| Key Results (Measurable Objectives) | Challenges | When | Cost |
|---|---|---|---|
| Electrical System: Implement high-priority safety upgrades for wildfire resilience by FY30. | CR-2 | FY26-30 | $$$ |
| Water Quality/Supply: Identify and address Ashland's water system vulnerabilities. | CR-3 | FY26-28 | $$ |
| Workforce Training: Develop a workforce training program and implement through a collaborative partnership. | RR-5, PS-2 & 3 | FY26 & Ongoing | $ |
| Work Crews: Hire, train, and deploy wildfire risk reduction work crews for hardening and vegetation fuels management. | PS-2 & 3, IM-1 | FY26 & Ongoing | $$ |
| Evacuation: Implement tailored evacuation preparedness strategies for all residents, workers, and visitors. | HS-1, 2; RE-1; SV-2 | FY26 & Ongoing | $ |
| Public Health: Implement smoke mitigation strategies for residents, workers, businesses, and visitors. | HS-3, SV-1 & 2, ES-1 | Ongoing | $ |
| Residential: Fund and implement residential engagement, residential structure hardening, and defensible space initiatives. | RR-1, 2, 3, 4, 5; R-1, 2, 3; SV-1, 2, 3, PS-1, 2 & 3; IM-1, 2, & 3 | FY26-FY36 | $$$$ |
| Renter Preparedness: Implement targeted wildfire risk reduction programs for rental properties. | R-1; 2, & 3; IN-2; PS-2 & 3 | FY26-FY36 | $$ |
| SVP Home Risk Reduction: Deliver wildfire risk reduction support for socially vulnerable populations. | SV-1, 2, 3; IN 1, 2, & 3; PS-2 & 3 | FY26-FY36 | $$ |

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| | | | |
|---|---|---|---|
| Landscape Resilience: Implement ongoing maintenance through prescribed burning while addressing tree mortality issues on federal lands in the city's WUI Zone. | LR 1, 2, & 3 | FY26–FY36 | $$ |
| Flexibility: Maintain some flexible funding to address emerging wildfire risk reduction needs. | PS–2 & 3; IM–1 | FY26–FY36 | $ |

*Table 27: Key Results Goal 5*

The structured approach outlined in this section provides a blueprint for sustainable implementation of the 2025 update to Ashland's CWPP.

# Challenges

Findings have been distilled into "challenge statements" and assigned an identifier **(in bold)** for tracking purposes. Baseline and desired conditions are identified to establish a foundation for action. Tracking metrics and proposed monitoring methods are listed as well.

| Implementation Challenge Statements |
|---|
| **Challenge IM-1:** Capacity and funding don't exist to accomplish meaningful mitigation to protect all of Ashland's critical values in a short timeframe. |
| **Challenge IM-2:** Implementation requires city funding and resources as a baseline and to meet required matching dollars for external grants. |
| **Challenge IM-3:** To be able to attract and administer significant funding we need dedicated city leadership, staff, and willing and able project partners. |

*Figure 54: Implementation Plan Challenge Statements*

## Baseline Conditions

- The local, state, and federal fund sources listed in the [appendices](appendices) provide several opportunities to fund wildfire mitigation initiatives. However, the availability of external funding is shrinking due to changing priorities at all levels of government and most sources require at least some degree of matching support. The ability to secure and administer funding requires a dedicated commitment of administrative time and resources.

- Two (2) City of Ashland wildfire mitigation staff are funded by a water meter fee. Since that fee was set ten (10) years ago and program costs have substantially increased, generated revenue is barely sufficient to pay the salaries of the Forestry Officer and Fire-Adapted Community Coordinator positions. These positions are critical to shepherd work outlined in the CWPP and to meet match requirements for federal grants.

- Financial assistance usually requires at least a 25% contribution (money or labor) by the beneficiary (including city government, but not always), though exceptions may be made based on fund source and income status.

- The City of Ashland has experience serving as the statutory partner to manage large grants from external funding sources and distribute funds to partners.

- Implementation of this CWPP cannot be accomplished with only city staff. A new approach is needed that leans heavily on community and partner capacity to engage and commit time and resources such as ACCESS, Workforce Oregon, the Ashland Chamber of Commerce, American Red Cross, Firebrand Resiliency Collective, Ashland Climate Collective, Jackson County COAD, local contractors, and many, many more.

## Desired Conditions

- Prevent catastrophic wildfire losses by reducing risk on 90% of vulnerable structures by 2036— protecting lives, homes, and what we value most.

- Harden Ashland's high value resources and assets (HVRAs) to wildfire through data-informed strategic planning and risk assessments. Monitor progress.

- Revise municipal codes to align with the 90% risk reduction goal by integrating clear compliance timelines and financial assistance for eligible populations.

- Establish a reliable city funding mechanism and build core capacity to partner, secure, manage, and match risk reduction funding.

- Secure an average of $8 million annually for ten (10) years to support wildfire risk assessments, implement inclusive community engagement initiatives, and fund building and infrastructure hardening and defensible space work.

## Tracking Metrics

- Progress toward 90% risk reduction-annual assessment of defensible space, structure hardening accomplished.
- Revenue generated by local funding mechanisms (e.g., water meter fee adjustment, new revenue sources).
- Number of workers trained and deployed through grants or partnerships.
- Workforce training effectiveness.
- % of new code updates adopted and compliance timelines initiated.
- Evaluate enforcement and compliance with updated codes.
- Development and public launch of a CWPP Implementation Dashboard.

## Monitoring Plan

- Will be developed for the tracking metrics.
- Frequency of data collection and reporting is dependent on which initiatives get funded.

# Initiatives

Initiatives have been proposed for each identified challenge and are listed below, as well as in a comprehensive Initiatives Table in the appendices. Implementation responsibilities, potential partners, and estimated project costs will be addressed as detailed work plans are created and projects receive funding.

## Implementation Initiatives

**Challenge IM-1:** Capacity and funding don't exist to accomplish meaningful mitigation to protect all of Ashland's critical values in a short timeframe.

| | |
|---|---|
| IM-1.1 | Complete wildfire risk assessments on high-value resources and assets. |
| IM-1.2 | Develop a strategy for wildfire risk reduction for socially vulnerable populations. |
| IM-1.3 | Identify revenue sources within the community that can be used to attract external funding to implement the CWPP. |
| IM-1.4 | Reserve funding to accomplish "resolve as we go" issues/needs. |
| IM-1.5 | Create or co-opt an existing charitable, non-profit foundation to receive donated funds and resources for wildfire risk reduction projects. |
| IM-1.6 | Solicit and manage external funding to hire, train, certify, and contract with risk reduction work crews to do prescribed structural hardening and code compliant fuels clearing. |

**Challenge IM-2:** Implementation requires city funding and resources as a baseline and to meet required matching dollars for external grants.

| | |
|---|---|
| IM-2.1 | Adopt a city fee structure that sustainably funds ongoing forest resiliency and newly outlined CWPP wildfire risk reduction priorities. |

**Challenge IM-3:** To be able to attract and administer significant funding we need dedicated city leadership, staff, and willing and able project partners.

| | |
|---|---|
| IM-3.1 | Create a stable revenue source for CWPP implementation management. |

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| IM-3.2 | Apply for Federal and State Assistance grants that offer financial support for hazard mitigation. Continuously collaborate with private, local, state, and federal entities to solicit and administer funding. |
| IM-3.3 | Monitor and report on plan implementation progress annually. Maintain real-time assessed property data to support transparency, citizen engagement, municipal code enforcement, and risk reduction progress on the CWPP dashboard. |

*Table 28: Implementation Initiatives*

# Closing Thoughts

# Closing Thoughts

Commitment. This one word sums up the 2025 City of Ashland Community Wildfire Protection Plan (CWPP) process. The CWPP is a synthesis of countless hours of work, both volunteer and paid, paired with detailed research, expertise, data crunching, and public outreach to meet the requirements of the Healthy Forests Restoration Act (HFRA) for a comprehensive community-based CWPP.

Writers of the CWPP update applaud the City of Ashland CWPP Management Advisory Committee for their insight and deference to creating a CWPP that strives to account for everyone in the community. Great lengths were taken to include observational comments from the community, and both quantitative and qualitative data were gathered from members comprising socially vulnerable populations, rental property owners and managers, homeowners and business owners, as well as other members of the community. To go to this length is unusual in CWPP processes, although it should be the norm, and the City of Ashland will now be seen as a pioneer in this area.

Best-practices in wildfire preparedness and mitigation were brought into this process, along with incorporating the latest technology in high-resolution LiDAR imagery and fire modeling.

The City of Ashland has a very high risk of wildfire – higher than 97% of communities in the United States (USDA Forest Service, 2024). The commitment that Ashland staff, community members, and volunteers brought to developing this CWPP must now carry into long-term policy and funding decisions. Ensuring a fire-resilient and fire-resistant Ashland requires stable, ongoing investment—built into city systems—to continue the work we've started together.

This is the time to prioritize practical, lasting solutions. As columnist Burton Hillis wisely said: "There's a mighty big difference between good, sound reasons and reasons that sound good."

It is our hope that current and future policy makers will see the sound reasons behind the actions and initiatives in the updated 2025 City of Ashland Community Wildfire Protection Plan, because real and lasting change requires a strong commitment. In 2020, the Almeda Fire provided a tragic example of what can happen when we simply sit on our hands and do nothing; now is *the time to act and commit to making a real difference.*

*Figure 55: Lithia Park, Photo Courtesy of Victoria Ditkovsky*

2025 Ashland Community Wildfire Protection Plan

# Disclaimer

# DISCLAIMER

*While no community wildfire protection plan (CWPP) is perfect, and the absolute prevention of wildfires or losses resulting therefrom cannot be avoided or prevented with 100% certainty, the 2025 City of Ashland Community Wildfire Protection Plan (CWPP) aims to reduce wildfire risks to life, property, and Highly Valued Resources & Assets (HVRAs) by minimizing the risk of fire spreading between wildland areas and structures, and by minimizing ignition vulnerabilities that may arise from embers and low-intensity surface fires. This plan serves solely as a resource for future pre-fire planning and is intended to enhance community safety from surface fires and windblown embers based on current best practices for mitigating ignition risks in wildfire-prone areas. However, it must be acknowledged that even if the CWPP is strictly adhered to in all respects, wildfires and losses resulting therefrom are still possible. MC Fire, LLC and its subcontractors have relied upon a wide variety of information provided through local working groups, third-parties, and peer-reviewed wildfire prevention practices to prepare this plan and cannot verify the accuracy or reliability of all third-party sources. MC Fire, LLC expressly disclaims any and all liability for any damage, loss, or injury arising from its reliance upon inaccurate or incorrect information provided by a third-party.*

*MC Fire, LLC considers the City of Ashland to be at high risk for wildfires and advises that the City of Ashland strictly adhere to the CWPP's actions, initiatives, and recommendations. The City of Ashland expressly acknowledges that excluding any action, initiative, or other recommendations from the CWPP carries significant risk. If any actions, initiatives, or recommendations are taken by the City of Ashland that are contrary to those provided in the CWPP, the City of Ashland expressly assumes the risk of doing so and further expressly agrees to hold MC Fire, LLC harmless for any and all liability or losses suffered as a result. The City of Ashland expressly agrees to indemnify MC Fire, LLC from any related legal claims or liabilities that may arise from actions contrary to those recommended in the CWPP or from wildfires in general that could not be prevented even by strict adherence to the CWPP.*

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# Glossary of Terms and Acronyms

# Glossary of Terms & Acronyms

## Terms

**Access** - fire department "access" refers to the ability of fire personnel and apparatus to reach a building, facility, or area during an emergency. This includes designated routes such as fire apparatus access roads, which ensure that fire engines, ladder trucks, and other emergency vehicles can effectively deploy equipment, access fire hydrants, and perform rescue or suppression operations.

**Assets** – human-made features, which can either be influenced positively or negatively by fire.

**Combustible** - materials that require higher temperatures to ignite compared to flammable materials. They have a flash point above 100ºF and are considered less volatile. Examples include treated lumber or damp vegetation.

**Defensible Space** – a strategically maintained buffer zone around a structure or property. This space is designed to slow or stop the spread of wildfire by reducing flammable vegetation and other fuels. It also provides firefighters with a safer area to defend the property.

**Dendroecologically** – refers to the study of ecological processes and relationships using tree-ring data. It combines dendrochronology (the study of tree rings) with ecology to understand how environmental factors like climate, soil, and disturbances (e.g., fires, insect outbreaks) influence tree growth and forest dynamics.

**Egress** - refers to the safe and efficient means of exiting an area or structure during an emergency.

**Flammable** - materials ignite and burn easily at relatively low temperatures. They have a flash point below 100ºF, which means they can catch fire quickly, making them more hazardous. Examples include dry grasses or untreated wood.

**High-Density Development** – refers to areas where structures are closely spaced, often with minimal separation distances. This density increases the risk of fire spread between structures due to proximity and shared exposure to embers or radiant heat.

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**Home Ignition Zone** – the areas around a structure which define its ignition potential, broken down into zones from 0' – 5' (Immediate Zone), 5' – 30' (Intermediate Zone), and 30' – 100' or greater (Extended Zone).

**Ingress** – refers to the ability or means by which emergency personnel, vehicles, or equipment can enter an area or access a location.

**Lack of Agency** - refers to a state where an individual, group, or organization does not possess the power, resources, or authority to take necessary actions or make decisions to address a specific need or problem.

**Ladder Fuels** – live or dead vegetation that allows a surface fire to climb from the ground level. vertically up into the canopies of nearby trees, thus propagating the increased spread of fire.

**Leaf Off** – refers to aerial imagery and tree classification during seasons when deciduous trees have lost their leaves.

**Leaf On** – refers to aerial imagery and tree classification during seasons when deciduous trees have their leaves.

**Multi-Family Housing Units** – four (4) or more housing units in the same building.

**Refugia** – Locations that experience less severe or less frequent disturbances than the surrounding landscape.

**Resilient** – refers to the ability to withstand, adapt to, and recover from wildfire events.

**Resistant** – focuses on the specific measures taken to prevent homes and structures from igniting during a wildfire.

**Resources** – naturally occurring features which can be influenced positively or negatively by fire.

**Structure Assessment** – the assessment of a structure's ignition vulnerabilities from exposures to embers, exposures to direct flame, and exposures to radiant heat, looking at structural materials as well as vegetation management and combustible storage around structures.

**Socially Vulnerable Population (SVP)** – defining a group of individuals or population that is at higher socioeconomic risk from the threat of natural disasters and/or economic upset.

**Urban Conflagration** - refers to a large, destructive fire that spreads within an urban area, often fueled by the dense concentration of buildings, infrastructure, and sometimes vegetation. These fires can occur when a wildfire encroaches on the boundaries of an urban area or when a fire starts within a city and spreads rapidly due to strong winds, dry conditions, and flammable materials. The term emphasizes the intersection of wildfire dynamics with urban settings, which often leads to devastating impacts on human life, property, and infrastructure.

**Wildland-Urban Interface (WUI)** – the interface and intermix between wildlands and the built environment.

## Acronyms

**AACH**    Asante Ashland Community Hospital

**AARP**    American Association of Retired Persons

**ADS**    Aerial Detection Surveys

**AF&R**    Ashland Fire & Rescue

**AFAR**    Ashland Forest All-Lands Resiliency Project

**AFRP**    Ashland Forest Resiliency Project

**AGL**    Above Ground Level

**AQI**    Air Quality Index

**AMC**    Ashland Municipal Code

**ARC**    American Red Cross

**AUC**    Area Under the Curve Analysis

**AWMP**    Ashland Wildfire Mitigation Project

**BAER**    Burned Area Emergency Response

**BLM**        Bureau of Land Management

**CAP**        Community Adaptation Program

**CC&R**       Covenants, Conditions, and Restrictions

**CERT**       Community Emergency Response Team

**COA**        City of Ashland

**COAD**       Community Organizations Active in Disasters

**CRP**        Community Response Plan

**CWDG**       Community Wildfire Defense Grant

**CWPP**       Community Wildfire Protection Plan

**DEM**        Digital Elevation Model

**DCBS**       Department of Consumer and Business Services (State of Oregon)

**DIY**        Do-It-Yourself

**EIS**        Environmental Impact Statement

**EPA**        Environmental Protection Agency

**FAC**        Fire Adapted Community

**FACC**       Fire Adapted Communities Coordinator

**FAIR**       Fair Access to Insurance Requirements

**FEMA**       Federal Emergency Management Agency

**FRC**        Firebrand Resiliency Collective

**GIS**        Geographic Information System

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|---|---|
| **HEPA** | High-Efficiency Particulate Air |
| **HFRA** | Healthy Forests Restoration Act (2003) |
| **HMM** | Hazard Mitigation Methodology |
| **HOA** | Homeowners' Association |
| **HVRAs** | Highly Valued Resource and Assets |
| **IBHS** | Insurance Institute for Business and Home Safety |
| **JCHHS** | Jackson County Health and Human Services |
| **JEOC** | Joint Emergency Operations Center |
| **KS WILD** | Klamath-Siskiyou Wildlands Center |
| **LiDAR** | Light Detection and Ranging |
| **LTRG** | Long-Term Recovery Group |
| **MAA** | Mount Ashland Association |
| **MSFD** | Minimum Fuel Separation Distance |
| **NEPA** | National Environmental Policy Act |
| **NFPA** | National Fire Protection Association |
| **NHMP** | Natural Hazard Mitigation Plan |
| **NIFC** | National Interagency Fire Center |
| **NIST** | National Institute of Standards and Technology |
| **NRCS** | Natural Resources Conservation Service |
| **NWS** | National Weather Service |

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|---|---|
| **OCDC** | Oregon Child Development Coalition |
| **ODEQ** | Oregon Department of Environmental Quality |
| **ODHS-OREM** | Oregon Dept. of Human Services – Office of Resilience & Emergency Mgmt. |
| **ODEM** | Oregon Department of Emergency Management |
| **ODF** | Oregon Department of Forestry |
| **OFMAS** | Oregon Fire Mutual Aid System |
| **OFRC** | Oregon Forest Resources Council |
| **OHA** | Oregon Health Authority |
| **OHCS** | Oregon Housing and Community Services |
| **OHRA** | Options for Helping Residents of Ashland |
| **OLLI** | Osher Lifelong Learning Institute |
| **OSF** | Oregon Shakespeare Festival |
| **OSFM** | Oregon State Fire Marshal |
| **OSU** | Oregon State University |
| **OWEB** | Oregon Watershed Enhancement Board |
| **PIT** | Point-In-Time |
| **RGB** | Red, Green, Blue (cameras) |
| **RVCOAD** | Rogue Valley Community Organizations Active in Disaster |
| **RVFPC** | Rogue Valley Fire Prevention Cooperative |
| **Rx** | Prescribed |

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|---|---|
| **SIZ** | Structure Ignition Zone |
| **SOESD** | Southern Oregon Educational Services District |
| **SOFEE** | Southern Oregon Fire Ecology Education |
| **SOFRC** | Southern Oregon Forest Restoration Collaborative |
| **SOU** | Southern Oregon University |
| **SOWREP** | Southern Oregon Wildfire Resiliency and Emergency Preparedness |
| **SSD** | Structure Separation Distance |
| **SVP** | Socially Vulnerable Population |
| **TNC** | The Nature Conservancy |
| **Tx** | Treatment |
| **UAS** | Uncrewed (or Unmanned) Aerial System |
| **USFS** | United States Forest Service |
| **WUI** | Wildland-Urban Interface |
| **WRAP** | Wildfire Risk Assessment Program |

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