THE Ember Alliance

2026

COOS COUNTY, OREGON

Community Wildfire Protection Plan

Coos County
Community Wildfire Protection Plan
2026 Update

PREPARED FOR COOS COUNTY, OREGON

PREPARED BY THE EMBER ALLIANCE

FORT COLLINS, CO

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APPROVAL AND SIGNATURES

This Community Wildfire Protection Plan (CWPP) was developed in response to the Healthy Forest Restoration Act of 2003 and complies with City Standards and Policies set forth by Coos Bay, Oregon. The CWPP is a collaborative effort to guide wildfire protection. Where possible, the County intends to apply the recommended practices to improve the community and Tribes and increase public safety.

The following individuals, Tribes, and organizations were engaged in developing the Coos County CWPP and approve the 2026 update:

Chief John Guenther:
Fire Defense Board Chief

Signature: _____

Date: 4/14/26

Tyler McCarty:
Coos Forest Protection Association

Signature: _____

Date: 4/20/26

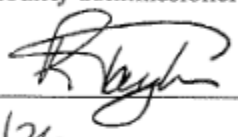
Chief Justin Ferren:
Southwest Oregon Fire Chief's Association President

Signature: _____

Date: 04/14/2026

SIGNATURES Continued

Rod Taylor:
Coos County Commissioner

Signature: 

Date: 5/6/26

John Sweet:
Coos County Commissioner

Signature: 

Date: 5/6/26

Drew Farmer:
Coos County Commissioner

Signature: 

Date: 5/7/26

Ole Buch:
Oregon Department of Forestry Representative

Signature: Ole Buch

Date: 4/22/2026

SIGNATURES Continued

Armando Martinez:
Emergency Management Coordinator of the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians

Signature: _____

Date: 4/22/2026

Lon Matheny:
Emergency Management Director of the Coquille Indian Tribe

Signature: _____

Date: 4-21-26

In Memory

This plan is respectfully dedicated to the memory of Coos County firefighters from Coos Bay Fire and Rescue. Their unwavering service, leadership, and commitment to the citizens of Coos County leave a legacy that will not be forgotten.

Lt. Randall Carpenter
46 years old, 20+ years in service

Firefighter Jeffery E. Common
30 years old, 8 years in service

Firefighter Robert "Chuck" Hanners
33 years old, 13 years in service

Table of Contents

How to use this CWPP Document

This document is designed for everyone that lives, works, and manages land within and around Coos County. Different sections will be most helpful to different people; please use this guide to direct you to the resources most relevant to you.

I want to learn the basics about wildfire, my community, and CWPPs.	• Section 1.a to learn about CWPPs. • Section 2.f to learn about wildfire threats in your local fire protection district. • Appendix A for an introduction to fire behavior.
I want to learn about protecting my home and family.	• Section 3.a to learn about the actions you can take, including detailed recommendations and research-backed guidance for protecting your home and family. • Section 3.a to find detailed hazard ratings and recommendations for your neighborhood.
I want to learn about community-led action.	• Sections 3.a, 3.b, and 4.c to learn about the actions communities can take together to better protect everyone, including funding opportunities. • Section 3.e and 4.b to learn about all the actions for Coos County.
I want to learn about landscape-scale wildfire mitigation.	• Section 2.e, 2.f and 2.g to learn about fire history and treatment history in the area. • Section 4.b to learn about priority fuel treatment projects for this community. • Sections 4.b and 4.c for general recommendations for stand-level and roadside fuel treatments.
I want to learn about the science behind these recommendations.	• Appendix B to learn about modelling methodology for fire behavior and evacuation modelin, on-the-ground hazard assessments, and treatment prioritization. • Appendix C for survey methology and results. • Section 7 to see all referenced research and information.

Acronyms

ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
CCEM	Coos County Emergency Management
CCEC	Coos-Curry Electric Cooperative
CCFD	Coos County Fire Departments
CCNWAB	Coos County Noxious Weed Advisory Board
CCRFPD	Coos County Rural Fire Protection District
CFPA	Coos Forest Protective Association
CR	County Road
CTCLUSI	Confederated Tribes of the Coos, Lower Umpqua, & Siuslaw Indians
CWDG	Community Wildfire Defense Grant
CWPP	Community Wildfire Protection Plan
CIT	Coquille Indian Tribe
DEQ	Department of Environmental Quality
DFPC	Division of Fire Prevention & Control
FAC	Fire Adapted Community
FEMA	Federal Emergency Management Agency
HIZ	Home Ignition Zone
HFRA	Healthy Forests Restoration Act
HOA	Homeowner's Association
ICS	Incident Command System
IIBHS	Insurance Institute for Business & Home Safety
CCSO	Coos County Sheriff's Office
NFPA	National Fire Protection Association
NHMP	Natural Hazard Mitigation Plan
NIAC	National Interagency Aviation Committee
NWCG	National Wildfire Coordinating Group
ODEQ	Oregon Department of Environmental Quality
ODF	Oregon Department of Forestry
ODPR	Oregon Department of Parks and Recreation
ODSL	Oregon Department of State Lands

OSFM	Oregon Department of the State Fire Marshal
OSU	Oregon State University
OSHA	Occupational Safety & Health Administration
PBC	Pile Burn Cooperatives
PODs	Potential Operational Delineations
SVI	Social Vulnerability Index
TEA	The Ember Alliance
USFS	U.S. Forest Service
USFWS	U.S. Fish & Wildlife Service
VPD	Vapor pressure deficit
WUI	Wildland-Urban Interface

Refer to the Glossary for definitions of the words and phrases used throughout this document.

EXECUTIVE SUMMARY

CWPP Overview

In 2026, Coos County updated their Community Wildfire Protection Plan (CWPP) to create a roadmap for prioritized mitigation, community preparedness, and coordinated emergency response. The CWPP integrates updated fire science, comprehensive risk assessments, existing strategic plans, leadership from Tribe, agencies, and other partners, and local knowledge to outline priority mitigation activities and recommendations. The plan aligns with national strategies such as the Healthy Forests Restoration Act and the National Cohesive Wildland Fire Management Strategy, state strategies such as the State of Oregon 2023 Landscape Resiliency Plan, local strategies such as 2023 Coos County Natural Hazard Mitigation Plan, 2022 CTCLUSI Hazard Mitigation Plan, and the 2017 Coquille Indian Tribe Emergency Operations Plan.

Coos County encompasses approximately 1,600 square miles of forests, coastline, sand dunes, river corridors, grasslands, mountains, and both rural and urban communities. Humid coastal conditions make wildfire risk appear less likely in Coos County than in drier parts of Oregon. However, history shows that on a day with hot, dry winds blowing out of the east, fire growth could be tremendous, as evidenced by the 1936 Bandon Fire. More recent fires include a 400-acre fire on North Bank Road in September 2020 and the Moon Complex Fire in September 2025.

Coos County, with roughly 65,000 residents and up to 40,000 visitors on any given day, scattered throughout the terrain - including a high proportion of older adults, those living off the grid, and households with limited financial resources, the county faces elevated vulnerability during wildfire events. Many homes and vacation destinations are located on narrow roads, steep terrain, or heavily vegetated parcels, increasing the challenge of safe evacuation and effective response.

CWPP Mission and Goals

The mission was to create a CWPP for Coos County that will prepare and protect the people, property, and resources of Coos County from wildfire through education, prevention, mitigation, and collaboration. The CWPP aims to identify actions and strategies Coos County stakeholders can pursue and implement to enhance community and landscape resilience and contribute positively to the Coos County way of life. Specific goals for the CWPP are as follows:

1. Hazard assessment & inventory: Refine the wildfire hazard assessment to ensure the use of new and enhanced data to prioritize wildfire risk reduction activities in Coos County.
2. Wildfire safety and awareness: Increase knowledge about wildfire safety among seasonal and full-time residents, recreators, and visitors who live, work, or recreate within the Coos County wildland-urban interface (WUI).
3. Mitigate risks in the home ignition zone (HIZ): Empower residents and municipalities to harden homes and mitigate risks in the HIZ to make the community safer.
4. Enhance wildland fire response: Enhance interagency communication, increase capacity, including personnel, training, and equipment, and increase coordination among local, state, and federal agencies to address wildfire risk reduction and emergency response.
5. Enhance evacuation preparedness: Increase access / egress on County roads, keep easements clear and unobstructed on all County roads, expand evacuation planning, and empower residents to be prepared for emergencies.
6. Fuels reduction: Reduce hazardous fuels in the WUI on public and private land and around critical infrastructure.
7. Noxious weed / invasive species control: Reduce the occurrence and rate of spread of flammable noxious weeds / invasive species in Coos County.

Community and Partner Engagement

This CWPP was developed through a collaborative process involving fire districts, Tribes, community members, local governments, landowners, and state and federal partners. Stakeholders contributed to risk identification, values mapping, and the selection of priority projects. The Tribal Nations of the Coquille Indian Tribe and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians are equal partners in this collaborative plan. Their emergency preparedness, fuels management, cultural traditions, and land stewardship strengthens the outcome of this CWPP.

Stakeholders participated in workshops, public meetings, and project reviews, contributing feedback that directly shaped the CWPP's recommendations and priorities, ensuring the plan addresses diverse community needs. A large thank you to all residents who provided their valuable feedback through the CWPP community survey.

Wildfire Risk in Coos County

Coos County is facing heightened wildfire risks driven by shifting climate patterns, ongoing development in the WUI, regional fire activity, the buildup of hazardous fuels, and the expansion of noxious, pernicious, and highly flammable weeds such as gorse, Scotch broom, and blackberries. Although the area has traditionally benefited from a wetter coastal climate, there have been several large wildfires in Coos County in the past, and recent fire seasons across Oregon reveal that coastal communities are experiencing greater fire volatility. The CWPP acknowledges that wildfire cannot be entirely prevented, yet the likelihood of catastrophic losses can be reduced.

Wildfire risk varies across Coos County, with the highest relative risk in the eastern areas where extreme fire behavior and structure exposure are more likely. Some areas, such as CTCLUSI land, have a moderate relative risk for wildfire because they lack homes despite high fire-behavior potential even though it is in the far eastern portion of the County and has a high potential for extreme fire behavior, while districts like North Bend FD and Myrtle Point RFPD face lower overall risk due to less potential for extreme fire behavior and therefore less potential structure exposure. Certain fire protection districts show mixed risk profiles—for example, Bandon RFD has high structure-exposure and evacuation risk, but fewer suppression challenges due to accessible terrain and a wide road network. Areas with elevated structure-exposure risk that lie outside any fire protection district are of particular concern, and annexation or creation of new districts is recommended to ensure adequate protection.

Priority Actions

The Coos County CWPP outlines dozens of strategic actions for residents, Tribes, community groups, public land managers, county, state, and federal agencies, and non-profit conservation groups within Coos County to promote fire adapted communities and emergency preparedness. Actions and priorities were informed by resident feedback on the CWPP survey, existing plans, such as the Coos County Multi-Jurisdictional Hazard Mitigation Plan and strategic plans of the CIT and CTCLUSI, and feedback from the CWPP steering committee, fire chiefs, and other partners.

All priority action items are grounded in the seven goals of this CWPP. Key actions include maintaining and improving defensible space around homes, improving access routes, mitigating noxious weeds that exacerbate wildfire behavior, removing vegetation along road edges and around communication infrastructure, and improving emergency coordination among agencies.

The CWPP also underscores the need for clear and coordinated evacuation planning. Many rural neighborhoods face single-access routes, limited signage, or unmaintained roads. The plan provides guidance to evaluate and improve evacuation corridors and ensure residents understand evacuation zones, alert systems, and mobility challenges during emergencies.

Some activities have low financial cost but require a fundamental shift in attitudes and behavior to prioritize wildfire risk mitigation. Other actions are more substantial and require commitment and collaboration across the community to pool resources, apply for grants, and make incremental steps toward meaningful change. Many of these recommendations are aspirational and will require expanded capacity and funding, as well as patience and hard work from community members and leaders to make lasting changes.

Individual Responsibilities

Residents and landowners are responsible for reducing risk to their home, businesses, and properties and preparing their families for emergencies. The CWPP outlines priority steps for people can take to increase the chance that their homes stand strong against wildfires. It provides links to resources for more information on and assistance with assessing wildfire risk, implementing fuel treatments, and developing emergency plans. Two important and low-cost actions that residents can start with are (1) signing up for Coos County Citizen Alerts from Everbridge and (2) removing all vegetation and other fuel within 0-5 feet from their home and auxiliary structures (i.e., sheds, garages, barns, and other outbuildings).

Community Action

A key recommendation in this CWPP is starting a neighborhood ambassador program or similar community-led efforts to organize neighborhoods, lead projects, and keep momentum going. This type of program would add tremendous capacity to the county and empower residents to take a leadership role, organize their community, and affect real change to reduce risk and increase emergency preparedness. Rural fire protection districts are mostly run by volunteers, and volunteerism is down across the county and the country. Coos County Emergency Management and other agencies have small staff, and the Coos County Weed Advisory Board is run by volunteers. Additional capacity is critical for these agencies to accomplish goals in this CWPP.

Moving Forward

This CWPP represents a vital step toward a safer, more fire-adapted Coos County, prepared to meet the challenges of a changing wildfire landscape. The Coos County CWPP Update offers a clear, actionable strategy to:

- Reduce wildfire risk and strengthen community resilience.
- Foster stronger partnerships among residents, agencies, and organizations.
- Secure critical funding for wildfire mitigation and preparedness.
- Enhance community resilience through coordinated action and shared resources.

CWPPs are a guide and a plan for action. They should be revisited and reviewed annually, at minimum, by Coos County and the CWPP Implementation Committee, potentially tied to the planned Coos and Curry CWPP Workgroup being led by CFPA and OSFM. Regular meetings of the CWPP Implementation Committee can include reviewing progress on priority actions, celebrating treatments, outreach events, new partnerships. and collecting implementation ideas for the next update. Through sustained investment and collaboration, Coos County can protect lives, property, cultural resources, and natural landscapes from the growing threat of wildfire.

1. Introduction

1.a. Purpose and Need for a CWPP

Community Wildfire Protection Plans (CWPPs) help communities assess local hazards and identify strategic investments to mitigate risk and promote preparedness (**Figure 1.a.1**). Assessments and discussions during the planning process form stronger relationships and shared understanding among fire protection districts, local and state agencies, Tribes, and land managers. These relationships better enable these entities to coordinate and respond to wildfires or other emergencies. The process also incorporates feedback from residents and other partners, resulting in a plan with prioritized actions that reflect local needs and values. This plan can also assist with funding gaps for risk mitigation projects since many grants require an approved CWPP.

> *"CWPPs have offered many valuable opportunities to communities, allowing them to identify local priorities for community protection and resource management... CWPPs have helped communities better protect themselves for fire risk and better manage their forested landscape."*
> *– Oregon Department of Forestry*

Located on the western coast of Oregon, in the south-western corner of the state, Coos County oversees 1,596 square miles in Oregon (U.S. Census Bureau, 2020) (**Figure 1.a.2**.). The Pacific Ocean shapes much of the county's western border with Douglas County, Oregon, directly to the north and east, with its own blend of forests, rivers, and the Umpqua River basin. Curry County, Oregon, borders Coos County to the south and the majestic Cascade Mountain Range are to the east. This area is the ancestral lands of The Confederated Tribes of Coos, Lower Umpqua, Siuslaw, and Coquille Tribes.

The landscape of Coos County is very diverse, including rugged cliffs, beaches and sand dunes, grasslands, mountainous zones, and evergreen forests. The Coos River and its tributaries weave through the landscape, offering opportunities for recreation as well as one of the largest natural harbors on the West Coast. The county enjoys a maritime climate, which means mild, wet winters and cool, dry summers which contribute to its lush vegetation and thriving ecosystems.

Figure 1.a.1 *Elements of a holistic and actionable CWPP.*

The 2026 CWPP update prepared for Coos County is a robust update to the 2011 CWPP that takes advantage of recent advances in fire science and addresses changes to fire risk, home construction, and other characteristics of the community. The CWPP includes a wildfire risk analysis, prioritization of mitigation activities, and implementation recommendations.

This document is a tool for Coos County residents, fire protection districts (FPDs), Tribes, land managers, communities, and homeowner's associations (HOAs) to prioritize projects that will make Coos County a safer and more resilient community to wildfire. The objectives of this project are to:

- Produce an actionable CWPP based on robust analyses of fuel hazards, burn probability, evacuation routes and congestion, and community values across the county.
- Provide recommendations, including prioritization, for reducing fuels and fire hazards, hardening homes, and increasing evacuation safety.
- Engage community members during the CWPP process to ensure local needs and concerns are addressed.

- Through collaboration, set the stage for planning and implementation by residents, indigenous peoples, FPDs, HOAs, and agency partners to mitigate hazards and promote community preparedness.

Complex interactions among wildland fuels, weather, and topography determine how wildfires behave and spread. Many aspects of wildfires are predictable based on known scientific research on the physical processes driving fire. Much of the work in this CWPP is based on scientific research and computer models of wildfire behavior. A basic understanding of fire behavior aids in interpreting the findings and recommendations reported herein. See **Appendix A. Introduction to Wildfire Behavior and Terminology** and the **Glossary** for key terms.

Insurance companies do not use CWPPs or the analyses within this document, including wildfire modeling, evacuation mapping, or roadway survivability analyses, to determine insurance eligibility, pricing, or coverage. Insurers rely on their own proprietary risk models and data systems, which do not incorporate local plans or community-specific analyses.

In 2023 and in 2025, Oregon passed legislation [Senate Bill 82 (2023), Fire-Risk Transparency and House Bill 2563 (2025), General Insurance Transparency (Home + Auto) requiring insurance companies to be more transparent about how they assess wildfire risk, improving understanding of insurance decision-making.

The information in this CWPP is intended to support local planning, preparedness, and wildfire mitigation efforts, not insurance determinations.

CWPP Mission Statement and Goals

The mission of the Coos County Community Wildfire Protection Plan is to prepare and protect the people, property, and resources of Coos County from wildfire through education, prevention, mitigation, and collaboration. Specific goals for the CWPP are as follows:

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Bandon Fire Department with Debbie Mueller, Coos County Emergency Coordinator.

Photo credit: The Ember Alliance

Photo credit: The Ember Alliance.

Why is the CWPP relevant to me?

Becoming a fire adapted community that can safely coexist with wildland fire takes a concerted, ongoing effort by everyone who lives, owns property, protects, or manages land in and around this community. Conditions in Coos County share some risk factors common to past catastrophic wildfires across the country. This CWPP provides recommendations for how to prepare your family to safely evacuate during a wildfire, how to mitigate your home ignition zone to give your house a chance to stand strong during wildfires, and how to protect the lives of firefighters engaged in protecting your community.

Even if you do not have a permanent home on your property, you can take steps to protect your assets, including the value of your property; areas that are heavily burned have less aesthetic and monetary value. More importantly, the work you do to reduce fire risk on your property can amplify the work that your neighbors do on theirs, resulting in greater risk reduction for everyone. Removing trees from along roadways can increase the visibility of your property to firefighters, increase the accessibility of your property for fire engines, and reduce the chance that non-survivable conditions can develop and entrap residents and first responders during wildfires.

This CWPP is a call to action to do your part to continue making Coos County a beautiful and safe community. Land management partners and Fire Protection Districts are here to support your individual efforts, and they are committed to taking action to reduce wildfire risk and increase emergency preparedness for the benefit of this amazing community.

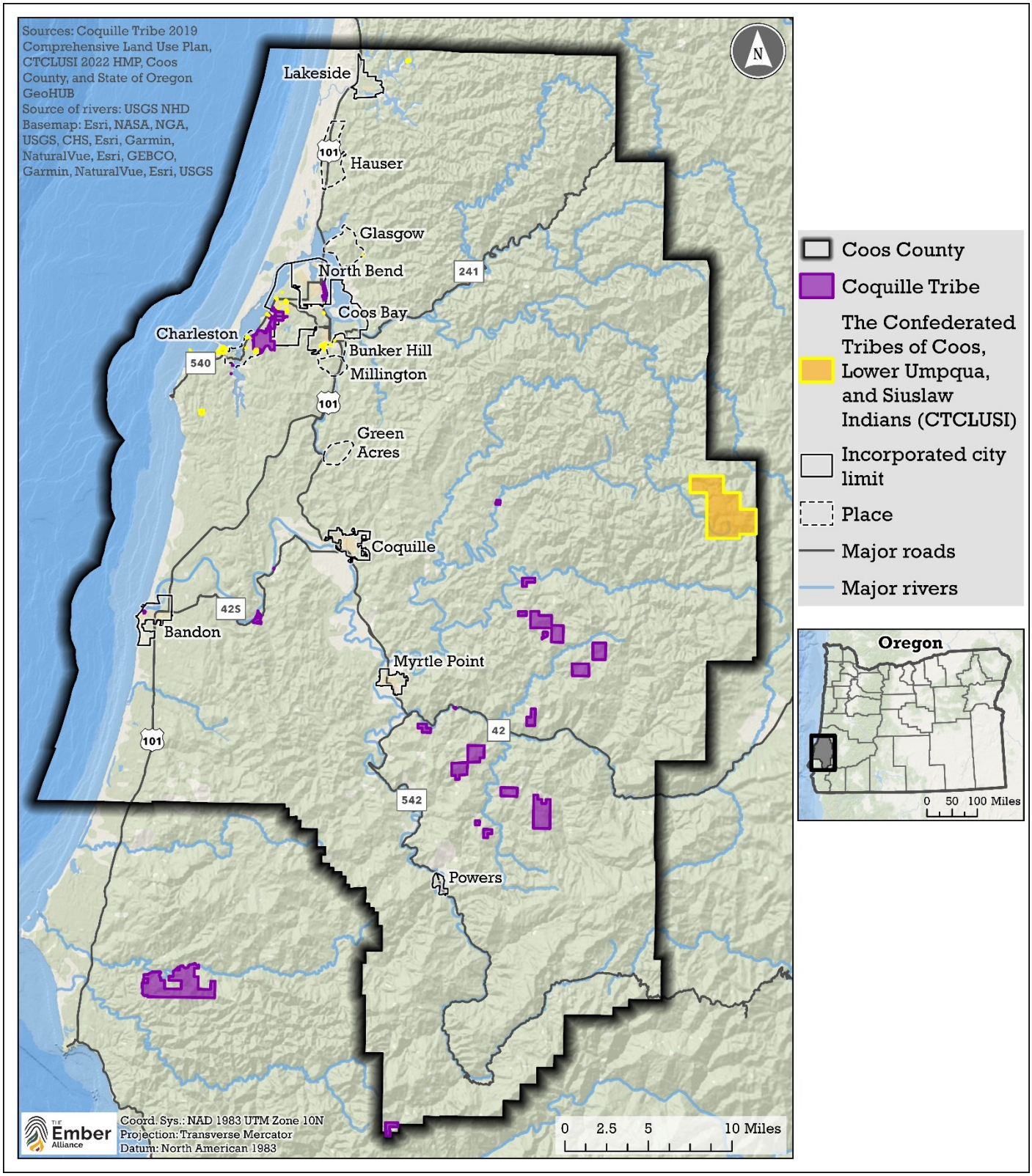


Figure 1.a.2 *Boundary of Coos County, Oregon. Source: Coquille Tribe 2019 Comprehensive Land Use Plan, CTCLUSI 2022 Hazard Mitigation Plan, Coos County, State of Oregon GeoHUB, and USGS National Hydrography Dataset.*

1.b. Community and Partner Engagement

Collaboration is an essential part of CWPPs. Community engagement, partner commitment, and follow-through are what make a CWPP successful and effective. The Ember Alliance—a Colorado nonprofit dedicated to fire management and community engagement—worked with partners in Coos County to write this CWPP. The CWPP Core Team consisted of representatives from Coos County Emergency Management, Oregon State Fire Marshall, and Coos County Forest Protective Association (CFPA). The CWPP Core Team met monthly and helped organize a CWPP Steering Committee, which consisted of numerous partners from across the county who met on a bimonthly basis (see list of Steering Committee members below).

The CWPP Core Team and Steering Committee incorporated lessons learned from recent, challenging wildfire seasons in Oregon and considered valuable insights shared by community members and other partners during the development of this CWPP. Recommendations in this CWPP also consider overlapping and related plans and prioritization processes in the county, state, and country, including:

- 2011 Coos County CWPP
- 2023 Coos County Natural Hazard Mitigation Plan
- 2023 Coos County Estuarine Resilience Action Plan
- 2022 CTCLUSI Hazard Mitigation Plan
- 2022 CTCLUSI Comprehensive Economic Development Strategy
- 2025 Coquille Resilience Management Plan
- 2019 Coquille Indian Tribe Comprehensive Land Use Plan
- 2017 Coquille Indian Tribe Emergency Operations Plan
- 2018 Gorse Management Strategy
- 2025-2029 Coos Watershed Association Strategic Plan
- Coos County Noxious Weed Management Plan
- 2024 Coos-Curry Electric Wildfire Mitigation Plan
- 2026–2028 PacifiCorp Base Wildfire Mitigation Plan
- 2023 State of Oregon Landscape Resiliency Plan
- 2023 USFWS Recovery Outline for the Sand Dune Phacelia
- 2007 USFWS Recovery Plan for the Pacific Coast Population of the Western Snowy Plover
- 1994 Northwest Forest Plan & Amendment
- 2023 Healthy Forests Restoration Act
- 2014 National Cohesive Wildland Fire Management Strategy

The Ember Alliance and Coos County would like to thank the following partners for their time and effort in developing, providing data, providing feedback, and planning implementation projects for this CWPP update:

- American Red Cross
- Bay Area Hospital
- Bureau of Land Management
- City of Bandon
- Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians
- Coos Bay Rail Line
- Coos Bay North Bend Water Board

- Coos County Airport District
- Coos County Commissioners
- Coos County Electric Co-op
- Coos County Emergency Management
- Coos County Fire Departments
- Coos County Open Space
- Coos Forest Protective Association
- Coquille Natural Resources Department
- Coquille Indian Tribe
- Gorse Action Group
- Oregon Department of Forestry
- Oregon Department of Food and Agriculture
- Oregon Department of the State Fire Marshal
- Oregon State University Extension

The CWPP Core Team and Steering Committee conducted extensive community and partner engagement to gain a better understanding of the community's current knowledge of wildfires, assess their concerns and needs, and learn about ongoing mitigation work. Engagement began in early 2025 and included:

- In-person partner kick off meeting in Coos Bay, Oregon on April 9, 2025. The purpose of the meeting was to gather information on values, concerns, needs, and ongoing efforts by organizations in Coos County regarding wildfire risk mitigation and emergency preparedness.
- Remote meeting on June 2, 2025, for partners who couldn't attend the in-person meeting.
- Public wildfire preparedness survey available online in spring 2025 to gather vital input from members of the community. The survey was completed by 129 respondents, most of whom were full-time residents of Coos County, and their feedback was incorporated into recommendations and priorities for the 2026 CWPP Update.
- Community capacity survey completed by fire departments and fire protection districts regarding wildfire suppression and emergency capabilities within Coos County.
- Meeting with agencies involved in wildfire response in April 2025 to discuss experiences and concerns with evacuations in Coos County.
- Meetings with agencies that facilitate fuel treatments, wildfire suppression, and prescribed burning in the fall of 2025 and spring of 2026 to discuss the findings of our fire behavior analyses and learn about their organization's fuel treatment priorities.
- In-person meeting with the Fire Defense Board on September 17, 2025, to garner feedback on CWPP analyses and draft priorities.
- In-person meeting in Coquille on September 18, 2025, with representatives from Coos County Emergency Management, fire protection districts, and various partner agencies and organizations to identify potential project areas. Many partner organizations were invited to contribute feedback, and those that included the in-person meeting included representatives from the Oregon State Fire Marshall, Oregon State University Extension, Oregon Department of Food and Agriculture, Coos Forest Protective Association, American Red Cross, City of Bandon, Gorse Action Group, Bay Area Hospital, Coos Bay Rail Line, Coos County Airport District, and Coos-Curry Electric Cooperative.

- Meeting with Coos County Weed Control District Advisory Board on October 1, 2025, to discuss synergies between their ongoing planning process and the CWPP.
- Questionnaire to help prioritize action items for the CWPP completed by steering committee members, fire chiefs, and participants at the in-person meeting on September 18, 2025.
- Follow-up conversations with partner organizations, such as the CTCLUSI, Coquille Indian Tribe, Gorse Action Group, and Bureau of Land Management, to gather feedback on relevant sections of the CWPP and set the stage for future collaboration.
- Final community meetings will occur after April 2026 as part of a "Road Tour" to share findings and recommendations from the CWPP update with multiple jurisdictions throughout the county.

The content and opinions expressed herein are those of the authors and do not necessarily reflect the position or the policy of other agencies and no official endorsement should be inferred.

Special thanks to the Coos County CWPP Steering Committee:

Name	Organization	Title
Armando Martinez	Confederated Tribes of Coos, Lower Umpqua, Siuslaw Indians	Emergency Manager
Cara Monson	Coquille Indian Tribe	Coquille Tribal Resilience
Chip Delyria	CCEM	Coos County Emergency Manager
Chris Mushrush	USFS	Fire Planner (Willamette NF, Siuslaw NF)
Corey Bryant	Green Acres Rural Fire Department	Fire Chief
Debbie Mueller	CCEM	Coos County Emergency Coordinator
Jeff Adkins	City of Coos Bay	Fire Chief and Emergency Manager
Jeremiah A. Phillips	BLM	Zoned Fire Management Officer, Coos Bay and Roseburg
John Guenther	Coos Bay Fire and Rescue; Coos County Fire Defense Board	Battalion Chief : Chief
Justin Ferren	Coos Bay Fire and Rescue; Southwest Oregon Fire Chief Association	Battalion Chief; President
Kyle Hensley	BLM	Field Manager: Central Oregon Field Office
Kelsey Scandle	OSFM	Fire Risk Reduction Specialist
Lon Matheny	Coquille Indian Tribe	Emergency Manager
Rob Aton	Central Coos Fire and Rescue	Chief
Robert Franson	CFPA: ODF	Aviation Specialist: Representative
Rod Taylor	Coos County Government	Commissioner
Shaye Edwards	BLM	Fire Prevention Specialist
Willy Burris	Myrtle Point	Fire Chief and Emergency Manager

Coos County, Oregon. Photo credit: co.coos.or.us

1.c. Accomplishments Since the Previous CWPP

Gorse Action Group

- Fuel Reduction Projects for Gorse, Butterfly Bush, and Scotch Broom: The Gorse Action Group, comprised of various agencies, has been battling the gorse issue for the last decade or so, and has been very successful. The county, Coos Forest Protective Association (CFPA), and other entities have been working on fuel reduction projects. As gorse is a persistent threat, on-going mitigation work will still be needed.
- In the last few years GAG has had an increase in seed funding for gorse control projects, expanded stakeholder representation, additional federal, county, and private funding, demonstration projects, education and outreach materials, as well as fire planning in local municipalities to reduce gorse fuels, for example efforts to control the 250 acre "Donut Hole" infestation located in the city of Bandon.

National Interagency Aviation Committee (NIAC)

- Interagency Coordination and Communications: Projects have been undertaken to upgrade the NIAC radio infrastructure for improved interagency communications throughout the county.

Coos Forest Protective Association (CFPA)

- CFPA worked with landowners of small parcels (<160 acres) in the Allegany area to remove fuels around structures and along roads to reduce future risk of high-severity wildfire. Funding came from the Oregon Department of Forestry Small Forestland Grant Program.
- In 2024, although CFPA's district did not experience a historic fire season, Oregon saw record-breaking acreage burned, highlighting CFPA's success in limiting fire spread within its jurisdiction (CFPA, 2024).
- In recent financial filings, CFPA reported over $5 million in annual revenue and expenses, reflecting its scale and operational capacity.

Coos County Emergency Management

- The Wildfire Monitoring Portfolio was an invaluable tool for maintaining situational awareness during wildfire events. Its comprehensive data allowed teams to track fire progression, assess potential risks, and support decision-making processes in real time. The tool significantly improved the ability to coordinate responses and allocate resources effectively.
- Staff played a pivotal role in guiding and mentoring local emergency managers in 2024 evacuation planning and issuing urgent public evacuation messages. These collaborative efforts ensured timely and accurate alerts and warnings and contributed to saving lives across multiple counties.
- Have local emergency responders taking multi-hazard post-disaster building and structure safety assessment training.
- Developing and disseminating information regarding current evacuation routes and developing a plan to identify and improve alternate evacuation routes to I-5 for wildfire and tsunami, meaning county road routes that are yet to be identified.
- Establishing mutual aid agreements between government agencies and commercial businesses in the event of an emergency (e.g., fuel, heavy equipment, food, etc.); Expanded MOUs (memorandum of understanding) to include the reciprocity of medical professionals between isolated communities.
- Educating and encouraging major businesses, service providers, schools, and governmental organizations to develop continuity of operations plans in the face of emergencies including having backup power and/or emergency operations plans in place to deal with power outages.

Coos County Planning Department

- Have utilized the final multi-hazard risk report and assessment currently being developed through FEMA's Risk Map program to update local risk assessment maps to show areas at risk for all hazards in Coos County.
- Encouraged new and existing developments in the WUI to incorporate wildfire mitigation measures such as fire-resistant building materials, firebreaks, and access for fire trucks to ensure adequate emergency access.

Coos-Curry Electric Cooperative (CCEC)

- A Wildfire Mitigation Plan was formalized in 2021, and outlines operations, maintenance, and construction standards to reduce wildfire risk and enhance public safety. The plan includes geographic risk assessments, specific to the micro-climates, terrain, and vegetation across Coos County. CCEC continuously updates the WMP based on emerging technologies and evolving wildfire patterns, with oversight from its board of directors.
- The cooperative actively monitors and removes hazardous vegetation, especially during peak fire seasons and has pruned approximately 110 miles of trees annually to reduce the risk of vegetation contacting power lines.
- CCEC actively forecasts and plans for opportunities to upgrade or improve the electrical system, thereby minimizing its potential to ignite a fire.
- CCEC monitors weather and fire hazard conditions daily. Their work system operations are adjusted based on CFPA fire levels and red flag warnings issued by the National Weather Service. They also have trained and equipped their field crews to monitor for wildfire risks (CC Electric Co-op, 2025).

Three stands meet in the foothills of the Cascade Mountains in Oregon, demonstrating Rotational Forestry: a fresh cut, a young stand, & an adolescent stand (Source: Marcus Kauffman, OR Dept. of Forestry, & Sightline Institute).

2. Coos County, Oregon: Background

2.a. General Description

Coos County covers 1,596 square miles and is bordered by Douglas and Curry Counties. Of Oregon's thirty-six counties, Coos County is the 23rd-largest county by area. According to the 2020 US Census, Coos County is home to 64,929 people. Approximately 17,750 (27%) of residents are over the age of 65, and 18% are under the age of 18. 15.6% of residents live below the poverty line, which is almost 3% higher than the state of Oregon. 70.7% of residents own their home with just over 69% of owner-occupancy rate (U.S. Census Bureau, 2020). Most of the population live in the northwest corner of the state with Coos Bay having the densest population numbers (1,508 people/square mile) of all cities in Coos County.

Tribal Interests

Many of the residents in Coos County are Indigenous People and have been in and on the Oregon lands for centuries. The Coquille Indian Tribe (CIT) and Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI) are recognized Tribes with a strong presence and long history in Coos County. "Since the [Coquille] Tribe's 1989 Restoration to federal recognition, we have regained ownership of about 10,000 acres. Though a mere fraction of our ancestral territory, their restored homelands are a priceless legacy. As members of the present-day Coquille Indian Tribe, we feel uniquely blessed to be stewards of these lands we call home" (Coquille Indian Tribe, n.d.).

Additional Tribes and indigenous groups have a stake and interest in the health of natural resources and communities of Coos County. During the process of writing and updating the 2026 CWPP, the Coquille Indian Tribes and the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians both actively participated.

The CIT has a robust emergency plan specifically addressing fire prevention measures in the wildland urban interface and has multiple mutual aid agreements with Charleston Rural Fire Protection District, North Bend Fire and Rescue, and Coos Forest Protective The 2019 Coquille Comprehensive Land Use Plan, notes the CIT, "Strives to be a leader in resilient ecosystem and resource management" along with "Coordinat[ing] and maintain[ing] effective community protection for fire management through appropriate agreements".

The 2024 CTCLUSI Hazard Mitigation Plan outlines goals to help "reduce the possibility of damage and losses due to wildland fire" along with objectives "aimed at increasing communication among [CTCLUSI] Tribal departments, initiatives, and programs, and with outside entities". Their plan encourages the creation of a community fire plan.

Ongoing efforts to plan for wildfire resilience should include Tribal interests and traditions.

Landownership

About 40% of land in Coos County is owned by industrial private landowners, 26% by non-industrial private landowners, and 32% by public agencies (**Table 2.a.1**; **Figure 2.a.1**). A large percentage of Coos County is managed by the Bureau of Land Management (BLM) and intermixed with industrial land, such as timber, cranberry farming, dairy farms, tree farming, and cattle /sheep ranching. Public lands are primarily managed by the BLM, U.S. Forest Service (USFS), Oregon Department of State Lands (ODSL), Coos County, and Oregon Department of Forestry (ODF). Large tracts of public land include over 30 parks, the Elliot State Research Forest, Oregon Dunes Natural Resource Area, Shore Acres State Park, Bullard's Beach State Park, South Slough National Estuarine Research Reserve, Siuslaw National Forest, and Rogue River-Siskiyou National Forest.

Table 2.a.1. *Landownership in Coos County by area (water excluded). Source: Oregon Department of Forestry and State of Oregon GeoHub.*

Landowner description	Percent of Coos County area
Industrial	41%
Non-industrial private	26%
Bureau of Land Management	15%
U.S. Forest Service	8%
Oregon Department of State Lands	5%
Coos County	2%
Oregon Department of Forestry	0.8%
Coquille Tribe	0.7%
The Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI)	0.6%
Oregon Parks and Recreation Department	0.5%
City agencies[1]	0.3%
Local governments[2]	0.1%
U.S. Fish & Wildlife Service	0.1%
U.S. Army Corps of Engineers	<0.1%
U.S. Department of Defense	<0.1%

[1]City of Bandon, City of Coos Bay, City of Coquille, City of Myrtle Point, City of North Bend, and City of Powers

[2]Coos Bay - North Bend Water Board, Coquille School District, Myrtle Point School District 41, and Port of Bandon

Community Lifelines

There are numerous community lifelines (non-residential highly valued resources) within Coos County, Some of these include forms of *safety and security* (22 fire stations, Southwestern Oregon Community College, seven school districts with 36 public and private schools, and critical government services [e.g., county courthouse, city hall, prison/correctional facility]), *health and medical* (3 hospitals), *communications* (10 post offices and 11 strategically located communication towers), *energy* (utility infrastructures), *transportation* (airports, highways, and sea ports), *food, hydration, and shelters* (manufactured homes), and *water systems* (wastewater treatment and dams). There is also important Tribal infrastructure (law enforcement, community center). Other community resources and assets include churches, historic and cultural sites, childcare facilities, campgrounds, trailheads, and picnic areas, including Laverne County Park, Tenmile Lakes Park, Riley Ranch, Powers County Park, and Bastendorff Beach Park which draw thousands of visitors to the area and are notably important because of their economic benefit to the county from year-round recreation. For more specifics about where to find community lifelines in and around Coos County, please refer to **Figure 2.a.2**.

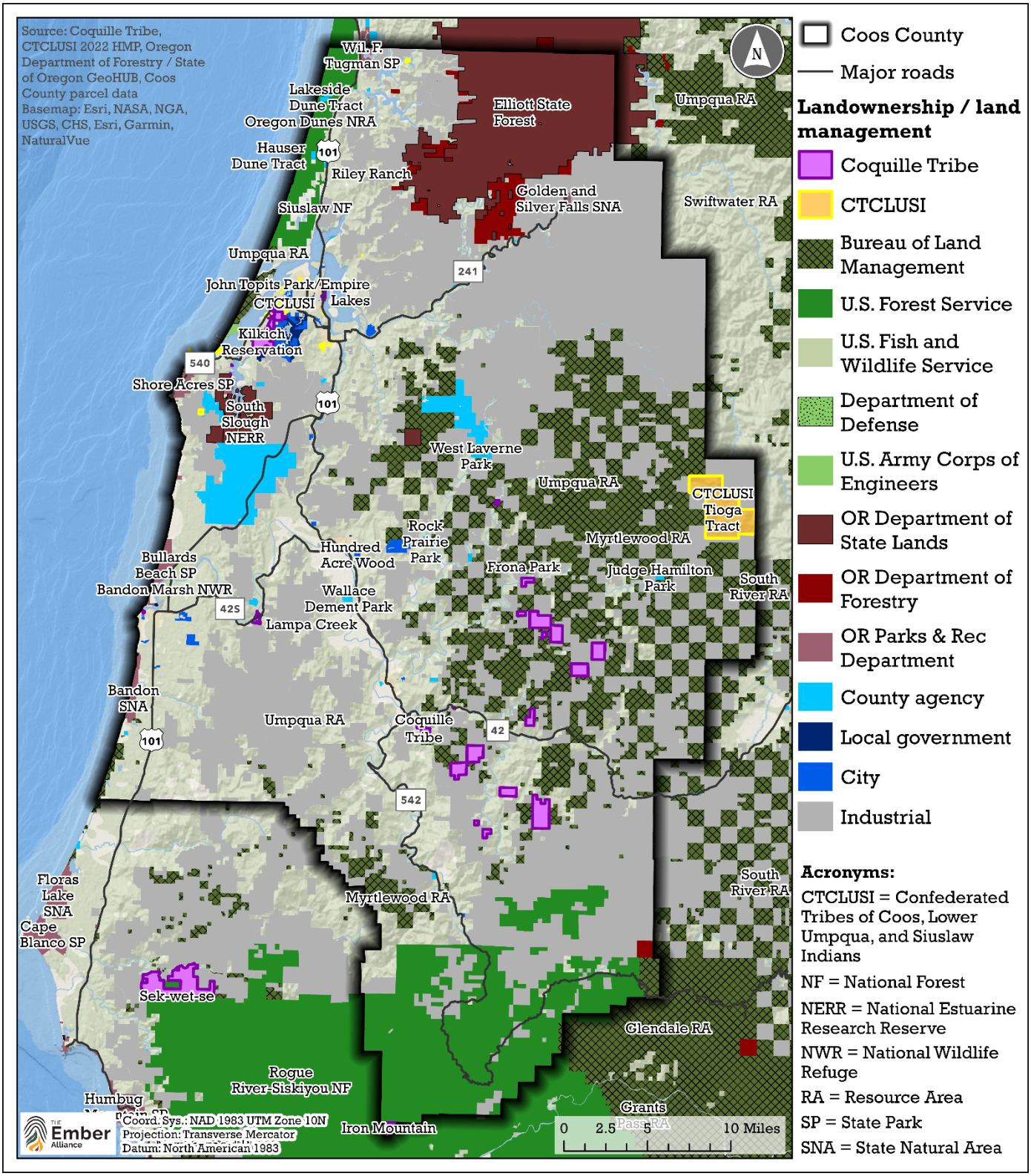


Figure 2.a.1. *Landownership/management within and around Coos County. Source: Coquille Tribe, CTCLUSI, 2022 Hazard Mitigation Plan, Oregon Department of Forestry/State of Oregon GeoHUB, and Coos County Parcel Data.*

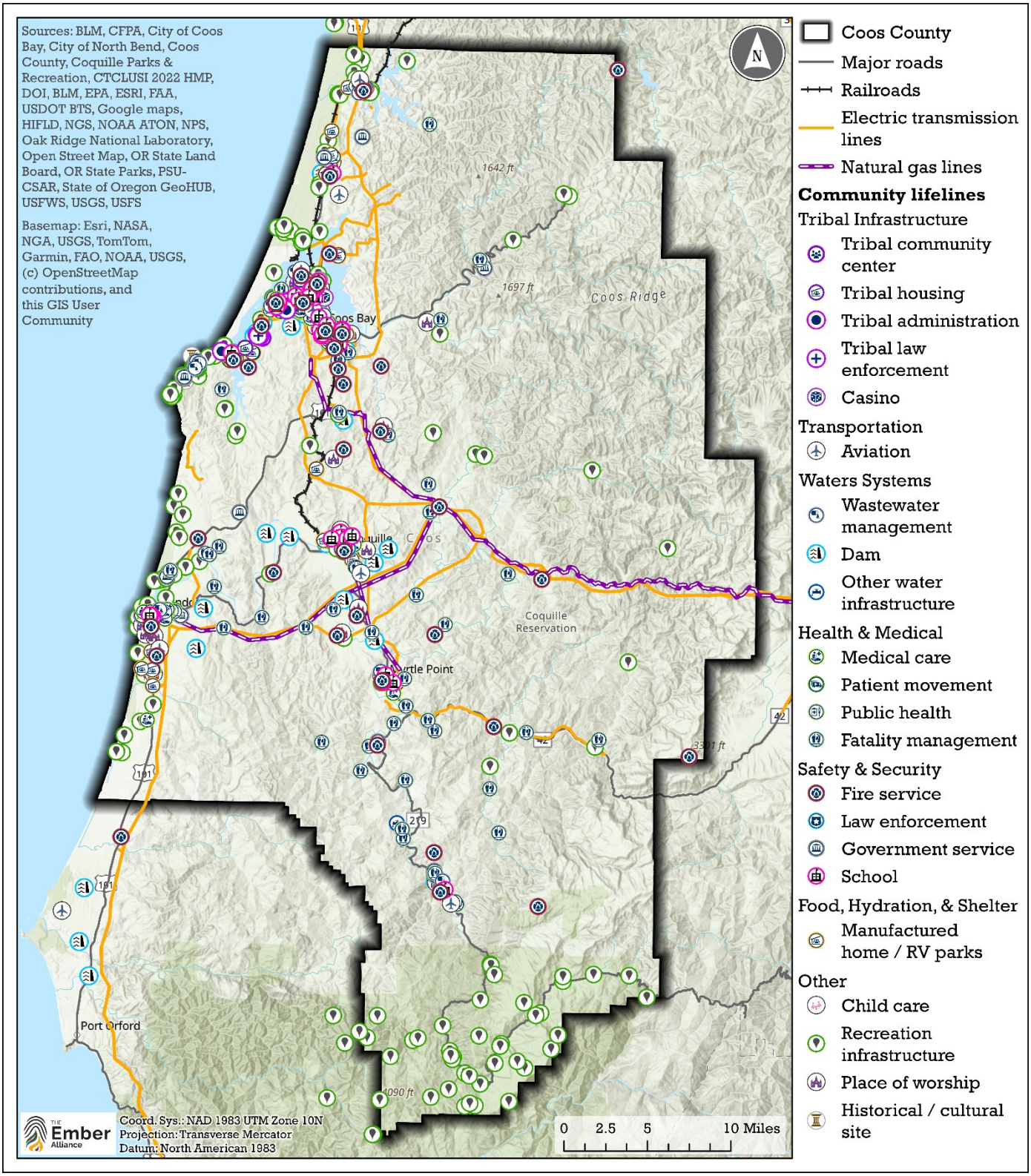


Figure 2.a.2. *Numerous community lifelines within Coos County provide essential services to residents, businesses, and visitors. Communication towers and other sensitive lifelines are excluded from the map for security reasons.* ***See the interactive map on the Coos County CWPP Storymap to zoom in and explore the community lifelines.*** *Sources: Listed on map.*

Geography

The geography of this region consists of Pacific coastal rocky and irregular shores, dune-backed beaches, and the Coos River, which forms wetlands and the largest estuary along the Oregon coast. The interior of the county is mountainous and transitions to the Klamath Mountains in the southern half of the county. The county lies within the Coos Watershed and elevations range from 0 ft at sea level up to 4,319 feet at Mount Boliva.

Climate

Coos County has a mild and humid marine climate that results from the moderating influences of the Pacific Ocean and rainfall induced by the Coast Range (Oregon Partnership for Disaster Resilience, 2010). Average temperatures are 44.2 degrees Fahrenheit in January and 60.9 degrees Fahrenheit in July, and average total precipitation is 56.8 inches (Oregon State Secretary of State's Office, 2025). Along the lower coastal elevations, rainfall averages between 60 to 95 inches per year and averages 100 inches or more along the higher western slopes of the Coast Range (Oregon Partnership for Disaster Resilience, 2010). Temperatures and vapor pressure deficits—an indicator of moisture stress on vegetation—increase steadily from lower elevations in the west to higher elevations in the east in the summer months (**Figure 2.a.3**).

During the summer, Coos County receives less rainfall, and hot temperatures and drier fuels at higher elevations create conditions optimal for large wildfires. Days with strong foehn winds blowing out to the east can further heighten wildfire risk during the dry summer months. Foehn winds out of the east most often occur in June through August, and they are associated with large forest fires in northwest Oregon and southwest Washington, including the 1936 Bandon Fire in Coos County (Cramer, 1957). In fact, most large wildfires in western Oregon since 1900 have coincided with warm-dry summers and at least moderate east wind events (Abatzoglou et al., 2021).

Vegetation

More than half of Coos County is forested by dense stands of Douglas-fir (*Pseudotsuga menziesii*) and western hemlock (*Tsuga heterophylla*) interspersed with regenerating forests that were recently clearcut (**Table 2.a.2**; **Figure 2.a.4**). Mixed conifer forests contain Douglas-fir, western hemlock, species of cedar, and bull pine/ponderosa pine (*Pinus ponderosa*). Hardwood and conifer-hardwood forests contain red alder (*Alnus rubra*), bigleaf maple (*Acer macrophyllum*), Oregon white oak (*Quercus garryana*), and Pacific dogwood (*Cornus nuttallii*). The coastal areas have large amounts of sawgrass sedges (*Cladium* genus) and some forests with lodgepole pine/scrub pine (*Pinus contorta*) and Sitka spruce (*Picea sitchensis*).

Table 2.a.2. *Vegetation in Coos County by area. Source: 2018 Oregon Statewide Habitat Map.*

Vegetation type	Percent of Coos County area
Douglas-fir - western hemlock	53%
Conifer-hardwood	9%
Regenerating forest	7%
Riparian	6%
Other conifer	6%
Mixed conifer	5%
Developed	4%
Wetlands	3%
Open water	3%
Hardwood	2%
Agriculture	1%
Sparsely vegetated	1%
Grassland	<1%
Shrubland	<1%

Wildlife

From the Coquille River to the ocean, great blue herons, grey whales, blue whales, elephant seals and Steller sea lions occupy the water and its shores, with families of river otters in the shallow waters. In the coastal dunes, along most of Coos County shores, the winds fly out of the west and head east molding the sands with western snowy plovers, pelagic cormorants, purple shore crabs, kelp crabs and gulls inhabiting the land and sky. Further inland, Coos County marshlands have an abundance of biodiversity: eagles, puffins, western sandpipers, loons, and black-bellied plovers occupy mudflats while tundra swans occupy the water. Into the dense Douglas-fir, Sitka spruce, and western hemlock forests, Columbian white-tailed deer (a once endangered species but now recovering) are found and graze nearby Roosevelt elk during the winter months.

The western snowy plover is an important species of concern in Coos County, and the BLM has designated the New River Area of Critical Environmental Concern for the protection of this species' habitat. New River runs parallel to the Pacific Ocean for nine miles separated only by a thin strip of sand, which creates estuary, forest, meadow, wetland, and shrub habitat important for many rare birds, animals, and plants. Rare plants include the threatened sand dune phacelia.

Puffins nest in the nooks of Coquille Point, Bandon, Oregon—an Oregon Islands National Wildlife Refuge. (Source: Bill Kuhlemeier).

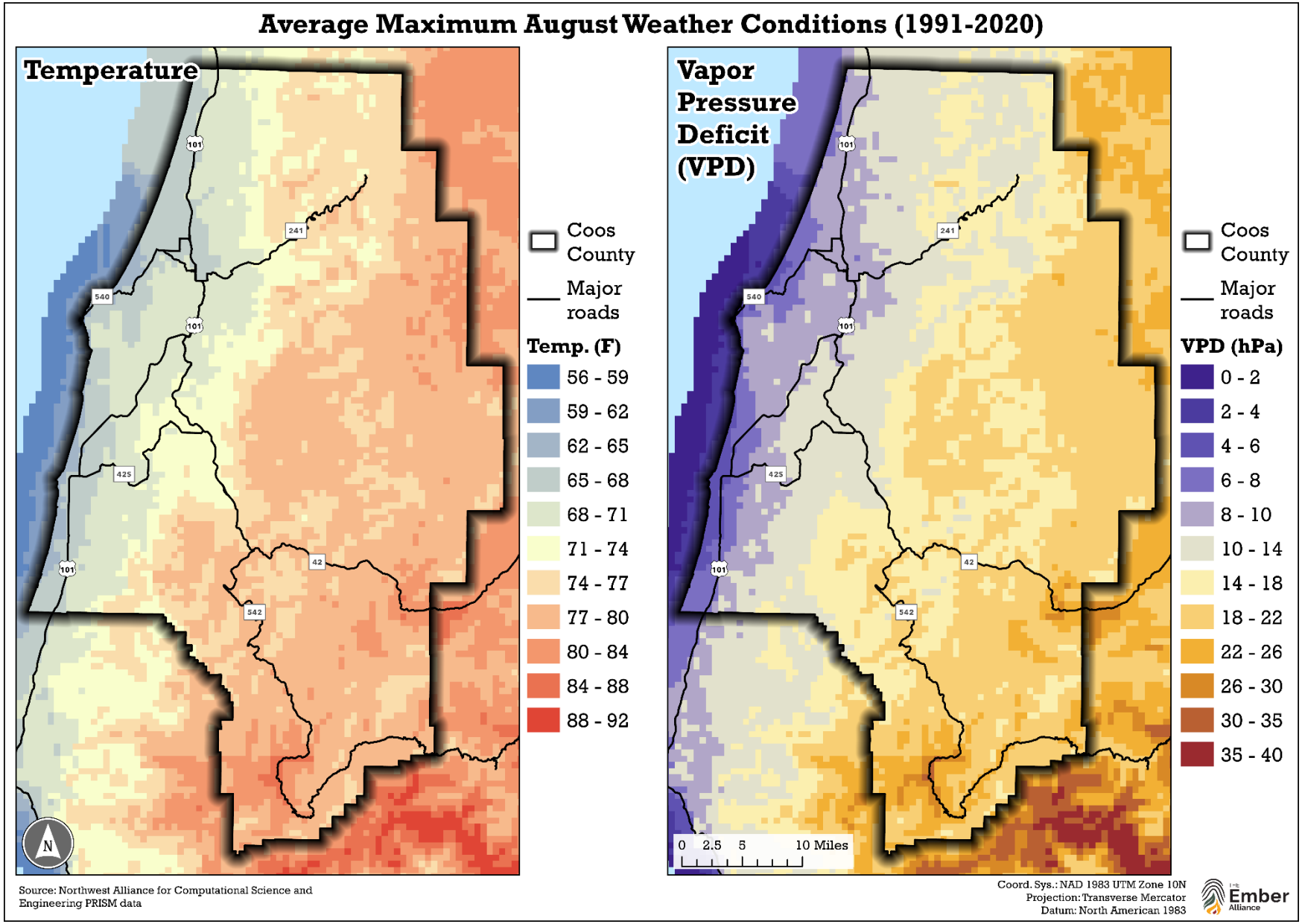


Figure 2.a.3. *Temperatures and vapor pressure deficit—a measure of moisture stress on plants—increase from west to east during the summer. Source: Northwest Alliance for Computational Science and Engineering, PRISM data.*

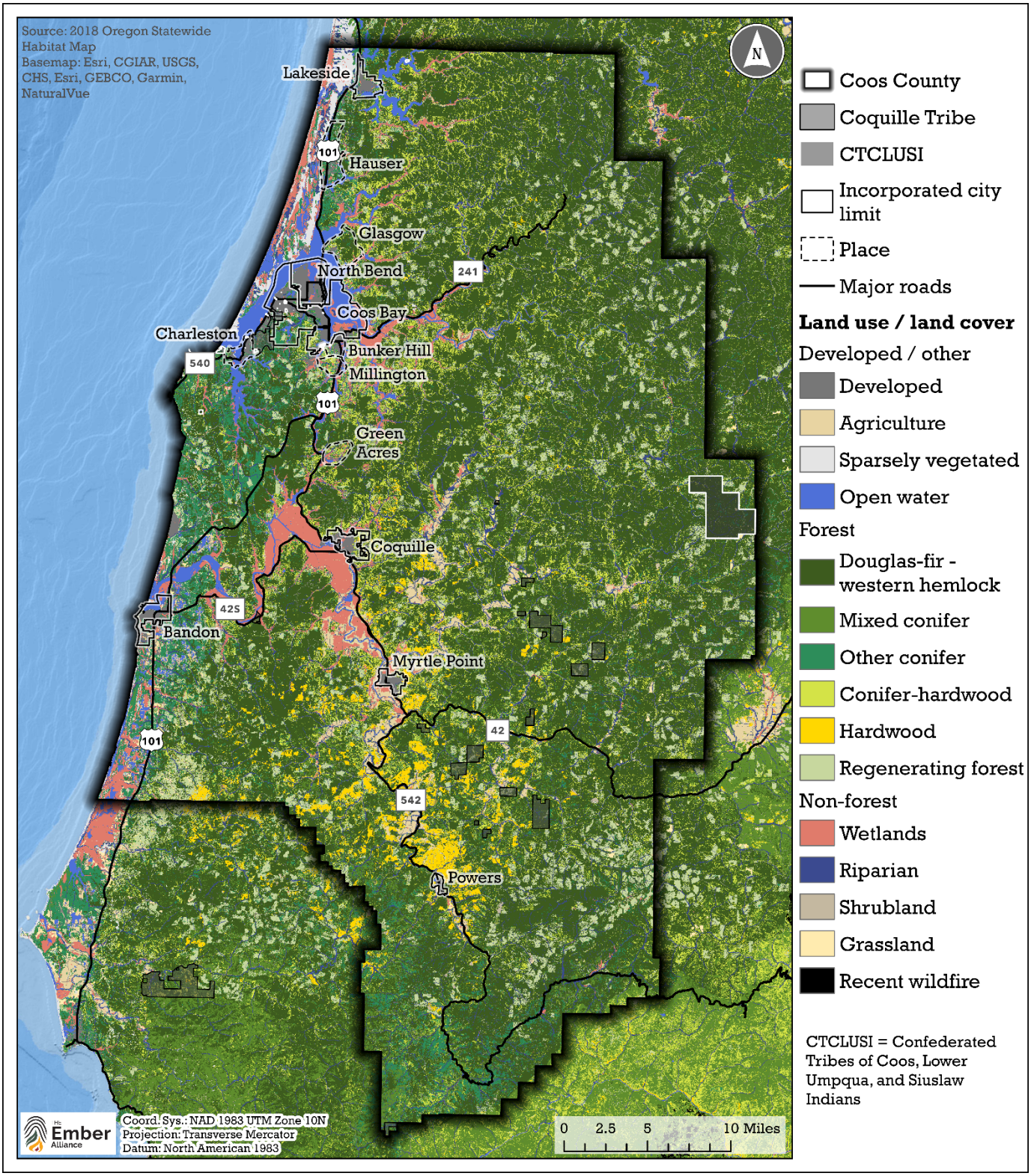


Figure 2.a.4. *Vegetation across Coos County. Source: 2018 Oregon State Habitat Map.*

2.*b.* County Capacity

Every year, hundreds of volunteers dedicate thousands of hours of their personal time to fighting fires and rescuing those in need. Their contributions are invaluable, and this CWPP would like to recognize their efforts with a heartfelt thank you and a well-deserved shout-out.

Emergency response in Coos County is highly effective. Coordinated response is a sophisticated organization of separate local, state, Tribal, and federal entities coordinating and sharing resources to deliver appropriate responses for each fire incident.

Tactical Tenders provided by the Oregon Department of the State Fire Marshal (OSFM) help to improve water delivery and fire suppression. Source: OSFM Engine Program.

Coos County is comprised of multi-jurisdictional partnerships with the Cities of Bandon, Coos Bay, Coquille, Lakeside, Myrtle Point, North Bend, and Powers. Coos County encompasses the special districts of the Port of Bandon, the Port of Coquille, and the International Port of Coos Bay (Marine and Rail). There are three hospital districts in Coos County: Bay Area Hospital, a Level III, Coquille Valley Hospital, a Level IV, and Southern Coos Hospital, which is a non-trauma hospital. Other special Districts include the Haynes Drainage District and the Coos Bay - North Bend Water District. As of November of 2025, a merger of Millington and Sumner into the Central Coos Fire Authority occurred which aims to enhance fire services and improve efficiency in the region by consolidating departments to address fiscal challenges and ensure adequate fire protection in the area. There are 20 structural fire departments within Coos County. The Fire Departments coordinate with each other to provide mutual aid and respond to calls near the borders of their district. All departments rely heavily upon volunteers to respond to calls and/or operate the station.

Fire suppression resources include the county, city, Tribal, and rural fire protection districts along with other resources available through area mutual aid agreements. The county has 22 fire departments and protection districts that serve Coos County as seen in **Figure 2.b.1**. These cover structural response while the Coos Forest Protective Association (CFPA) covers most wildland fire response. In 1910, the Coos Fire Patrol was started in Coos County by timber companies that wanted to preserve their industries and protect their livelihood and investments. Coos Fire Patrol eventually became the CFPA.

There is also the Oregon Department of Forestry, which is Oregon's largest fire department, protecting close to 16 million acres of forest. "These lands consist of privately owned forests as well as some public lands, including state-owned forests and, by contract, US Bureau of Land Management forests in western Oregon. ODF is also part of an extensive fire protection network that includes landowner resources, contract crews and aircraft, adults in custody crews, and agreements with public agencies across Oregon, the US, and British Columbia" (Oregon Department of Forestry, n.d.).

Not all properties in Coos County are covered by a structural fire department. For example, In November of 2025, the Fairview Road area, the annexation of territory into the Fairview Rural Fire Protection District was on the ballot and 65% of voters approved the measure. This annexation allows the district to extend its property tax rate to the newly annexed territory. While CFPA will assist with wildfire response on all properties in the county, they are not responsible for and not equipped to safely engage in structure protection without assistance from fire departments / fire protection districts. Properties that are not part of special tax districts or municipalities and are not paying taxes to support a fire department or fire protection district cannot assume that firefighters will be available or able to respond to structure fires on their property. About 3.2% of privately owned parcels with structures in the county (about 845 parcels) fall into the category of not having coverage by a structural fire department or fire protection district.

The Oregon Department of the State Fire Marshal (OSFM) has been improving Oregon's response to the escalating threat of wildfires by supporting local response efforts, facilitating regional mutual aid, and effectively managing conflagrations through the OSFM Engine Program. Types 3 and 6 engines and tactical tenders' makeup a large portion of their program which is designed to assist local agencies in containing fires and protecting Coos County communities. While participation in statewide mobilizations is not mandatory for host agencies, they are strongly encouraged "the use of OSFM apparatus at local and regional levels. Program funding was made possible through Senate Bill 762, Oregon's wildfire omnibus bill in 2021" (Oregon State Fire Marshal, 2025).

Coos County fire districts are mostly volunteers with some paid administering agencies. Sadly, volunteerism has dramatically declined over the past few decades. For example, in the mid-1990s Bandon Rural Fire District had 50 volunteers on their roster, but in 2025, only 20 volunteers were registered on their roster. Local fire districts/departments in Coos County use their staff, equipment, and other resources for initial attack to the best of their abilities. They often send resources to assist with fires outside the county during large events. While this system provides a support network regionally, the drawback is that fewer resources are available to each district or department's respective constituents. Also, during large events in other areas of Oregon or the Northwest which will require a region-wide response, it is likely that additional support will be limited or not readily available for local ignitions.

All Coos County fire districts and departments protect structures and carry mutual aid agreements with each other, and most also have them with neighboring counties, though the update of these agreements was last updated in 1995. Documentation of all the individual relationships is beyond the scope of this document, but general frameworks are provided within the Office of State Fire Marshall, for Oregon and agency-specific mutual aid agreements.

The USFS and CFPA protect wildland fire on lands within the county. CFPA provides wildland fire response for much of the county, including lands managed by the USFWS and BLM under mutual aid agreements. The USFS provides wildland fire protection, including initial attack, on their land. Federal and state agencies can mobilize additional personnel, equipment, aircraft, and logistical support if necessary. However, depending on regional availability and other circumstances, delays in the arrival of additional suppression resources may be several hours to days.

In addition, some timber companies have staff with fire training to assist with initial attack of wildfires on timberland. Oregon OSHA (Occupational Safety and Health Administration) standards allow for lumber workers to have fire training, which is not required, but highly encouraged.

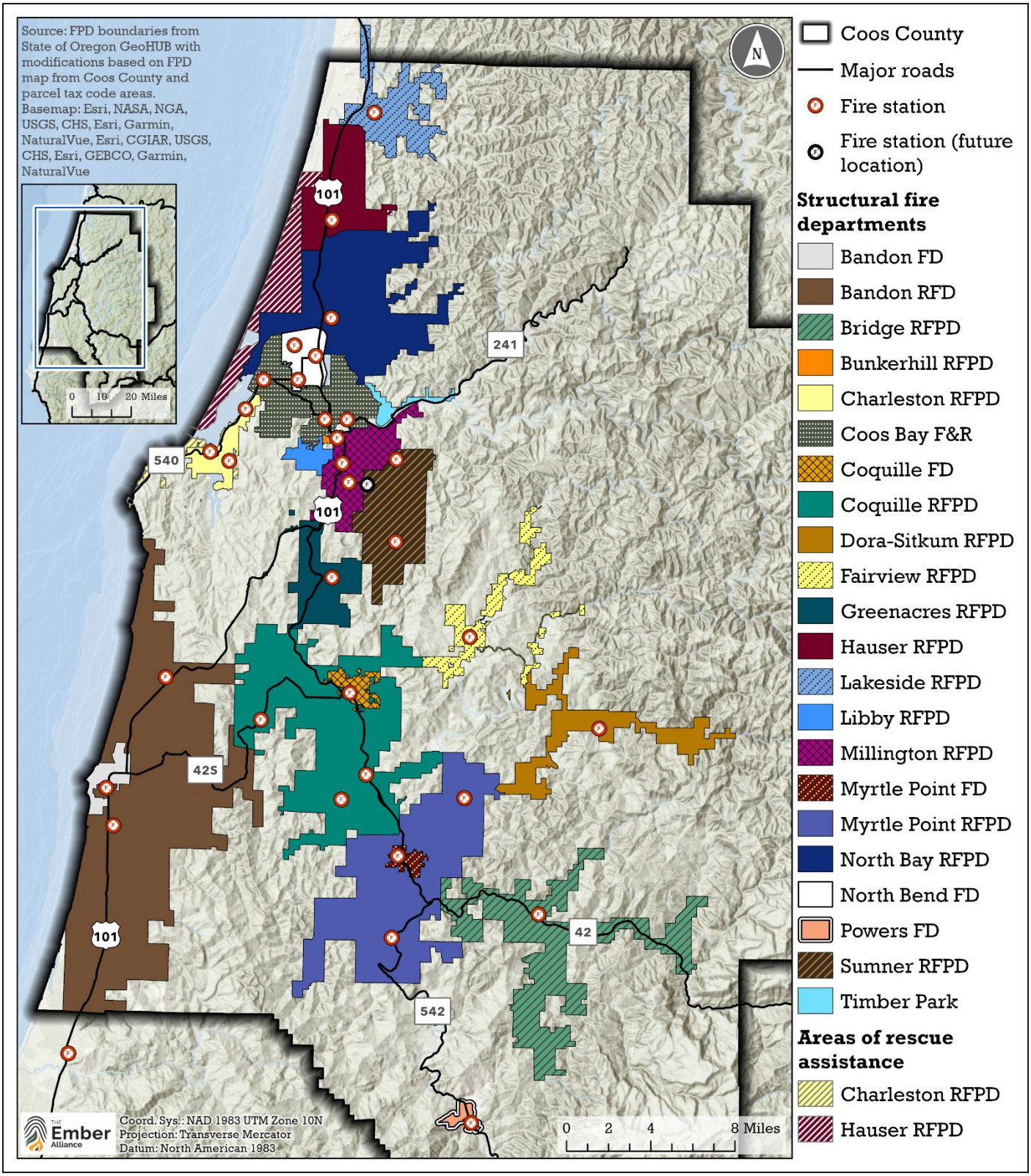


Figure 2.b.1 *Map of fire stations, structural fire departments and fire protection districts, and areas of rescue assistance in Coos County. Source: FPD Boundaries from State of Oregon GeoHUB with modifications based on FPD map from Coos County and parcel tax codes. Note: The Hauser Fire Station burned down at the beginning of October 2025 and was not yet rebuilt at the time that this CWPP was published.*

2.c. Wildland-Urban Interface

Every year, wildfires result in billions of dollars in fire suppression costs and destroy thousands of homes across the United States (Bayham et al., 2022; Higuera et al., 2023). Some of the most destructive, deadly, and expensive wildfires occurred in the past several years, partly due to construction of additional homes in the wildland-urban interface (WUI). Wildfire risk in the WUI is further exacerbated by severe fire weather perpetuated by climate change (Caton et al., 2016). Some examples of nearby fires include the Sept. 1936: Bandon Wildfire, with 146,000 acres burned and an estimated $1,000,000 in damages and the 2024 Durkee Fire, which according to Inciweb, was the 5th largest in Oregon history burning over 294,000 acres. See **Appendix A** for a discussion about how wildfires can threaten and destroy homes.

The WUI is any area where the built environment meets wildfire-prone areas—places where wildland fire can move between natural vegetation and the built environment and result in negative impacts on the community (Mowry and Johnston, 2018). The built environment includes homes, businesses, infrastructure, services such as utilities, roadways, and geographic features that aid in wildfire suppression, such as roads or ridgetops (*Healthy Forest Restoration Act*, 2003). People that live and work in the WUI must be aware of the effect that wildland fires have on their lives.

WUI exists along a continuum of wildland to urban densities (**Figure 2.c.1**). WUI is often subdivided into intermix, interface, and occluded types. Wildland-urban intermix refers to places where the built environment intermingles with wildland vegetation; wildland-urban interface refers to places where the built environment abuts a large area of wildland vegetation; and occluded refers to places where wildland vegetation is surrounded by the built environment (Johnston, 2018).

Figure 2.c.1*. The wildland-urban interface exists along a continuum of wildland to urban densities. Source: Community Wildfire Planning Center.*

About 90% of primary structures in Coos County are in the WUI (**Figure 2.c.2**). Parts of downtown North Bend are excluded from the WUI due to its distance from potential burning vegetation and sources of embers, as are several individual, scattered structures throughout the county. The WUI boundary for the CWPP is based off structure density and structure separation distance, following the approach to WUI outlined by the National Institute of Standards & Technology (Maranghides et al., 2022), and the potential exposure of structures to wildfire under extreme fire weather conditions, as described in **Section 2.f. Potential Fire Behavior and Exposure in Coos County**. The WUI also includes the land surrounding Upper Pony Creek Reservoir which is critical to the provisioning of clean surface drinking water. **See Appendix B for more details on methodology.**

The WUI map in this CWPP is not currently tied to any legal requirements for building codes in Coos County. There is also currently no formal statewide WUI for Oregon after State Bill 83 was passed in 2025. This CWPP includes recommendations that Coos County uses the WUI boundary in **Figure 2.c.2** as a basis for developing an official WUI boundary tied to WUI planning and zoning, with the purpose of making the community safer, reducing potential home loss, and reducing potential risk to firefighters and other first responders.

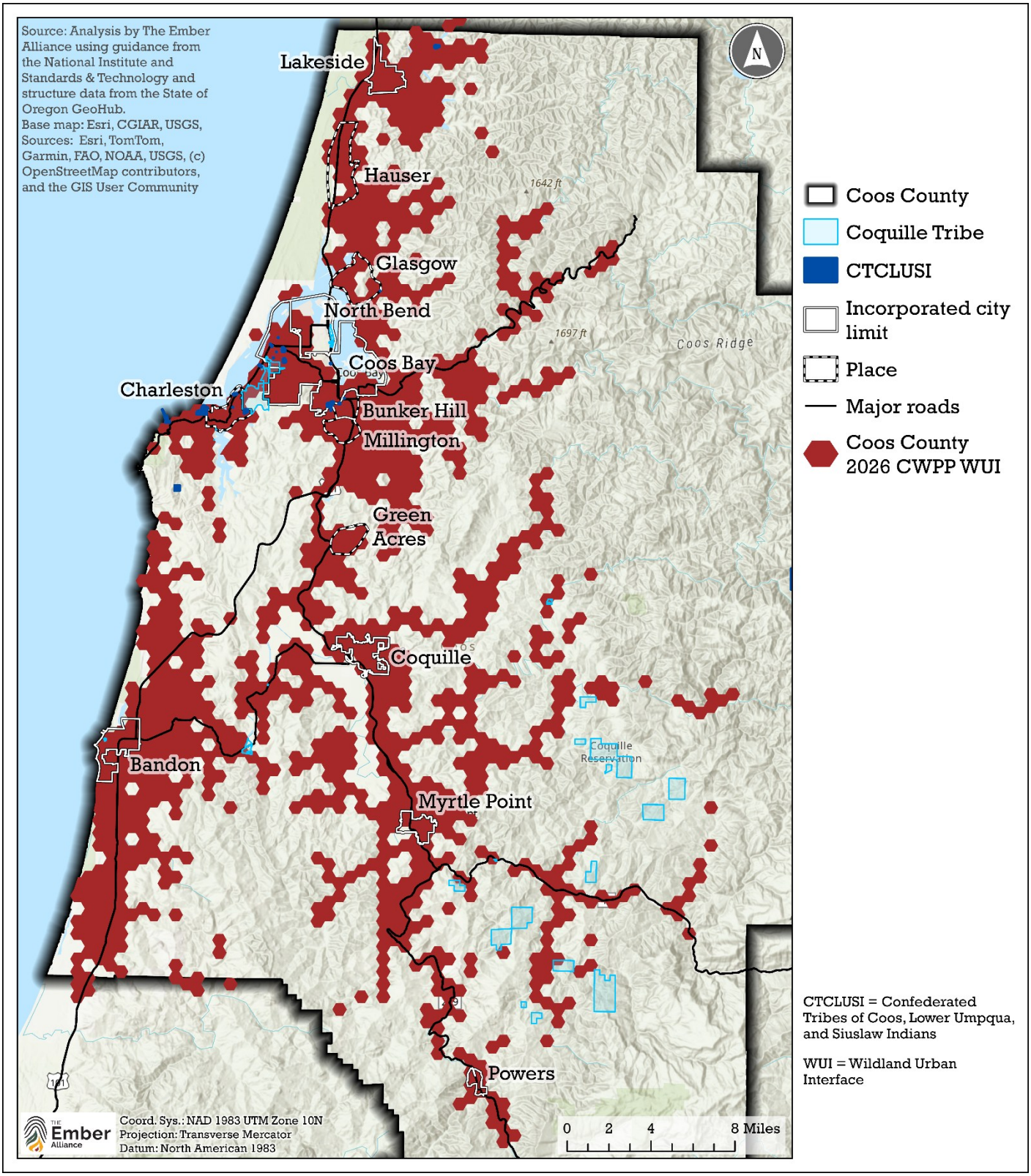


Figure 2.c.2. *About 90% of structures in Coos County fall into the wildland urban interface. Source: Analysis by The Ember Alliance using guidance from the National Institute of Standards & Technology (Maranghides et al., 2022) and structure data from the State of Oregon GeoHub. See methodology for delineating the WUI in* ***Appendix B****.*

2.d. Firefighting in the WUI

One of the standard firefighter orders is to "fight fires aggressively, having provided for safety first" (NWCG, 2018a). Firefighters are committed to protecting lives and property, but firefighting is particularly perilous in the WUI. The firefighting community is committed to wildland firefighter safety, which can require them to cease structure protection when conditions are exceedingly dangerous, particularly around homes with inadequate defensible space, safety zones, and egress routes.

High-intensity, fast-moving wildfires in the WUI can quickly overwhelm firefighting resources when homes begin igniting each other (Caton and others 2016). Firefighters are often forced to perform structure triage to effectively allocate limited resources during an incident, and more importantly, to protect the lives of firefighters. The Incident Response Pocket Guide (IRPG), which is carried by all firefighters certified under the National Wildfire Coordinating Group, explicitly states, "**Do not** commit to stay and protect a structure unless a safety zone for firefighters and equipment has been identified at the structure during size-up and triage" (NWCG, 2018a). The IRPG outlines four categories of structure triage:

1. Defensible – prep and hold.
2. Defensible – stand alone.
3. Non-defensible – prep and leave.
4. Non-defensible – rescue drive-by.

Do not count on firefighters staying to defend your home—your home should be able to stand strong on its own during a wildfire. There are never enough firefighters to stay and defend every single home during large incidents. The section **Mitigate the Home Ignition Zone** of this CWPP provides recommendations for how residents can increase the chance of their homes standing strong during wildfires and enhance the safety of

Shelly Road Fire: Property defended by firefighters. Photo Credit: Justin Ferren.

2.e. Fire History in Coos County

Wildfires and cultural burning heavily influenced Oregon's landscape before the era of fire suppression. Many Indigenous peoples utilized fire to steward the land, including ancestral lands of the Hanis Coos, Miluk Coos, Lower Umpqua, Siuslaw, and Coquille Tribes who hold much of Oregon as their ancestral land ("Native-Land Digital," n. d.). Indigenous burning practices maintained coastal meadows and grasslands (Oregon State University, 2025). Historic fire behavior in Douglas-fir – hemlock forests along the Coastal Range of Oregon ranged from moderately frequent, mixed-severity to infrequent, high-severity (stand-replacing) fires (**Figure 2.e.1**), and Sitka spruce forests along the coastal fog belt experienced very infrequent, intense, and stand-replacing fires every 300-1,000 years (Groth, 2024).

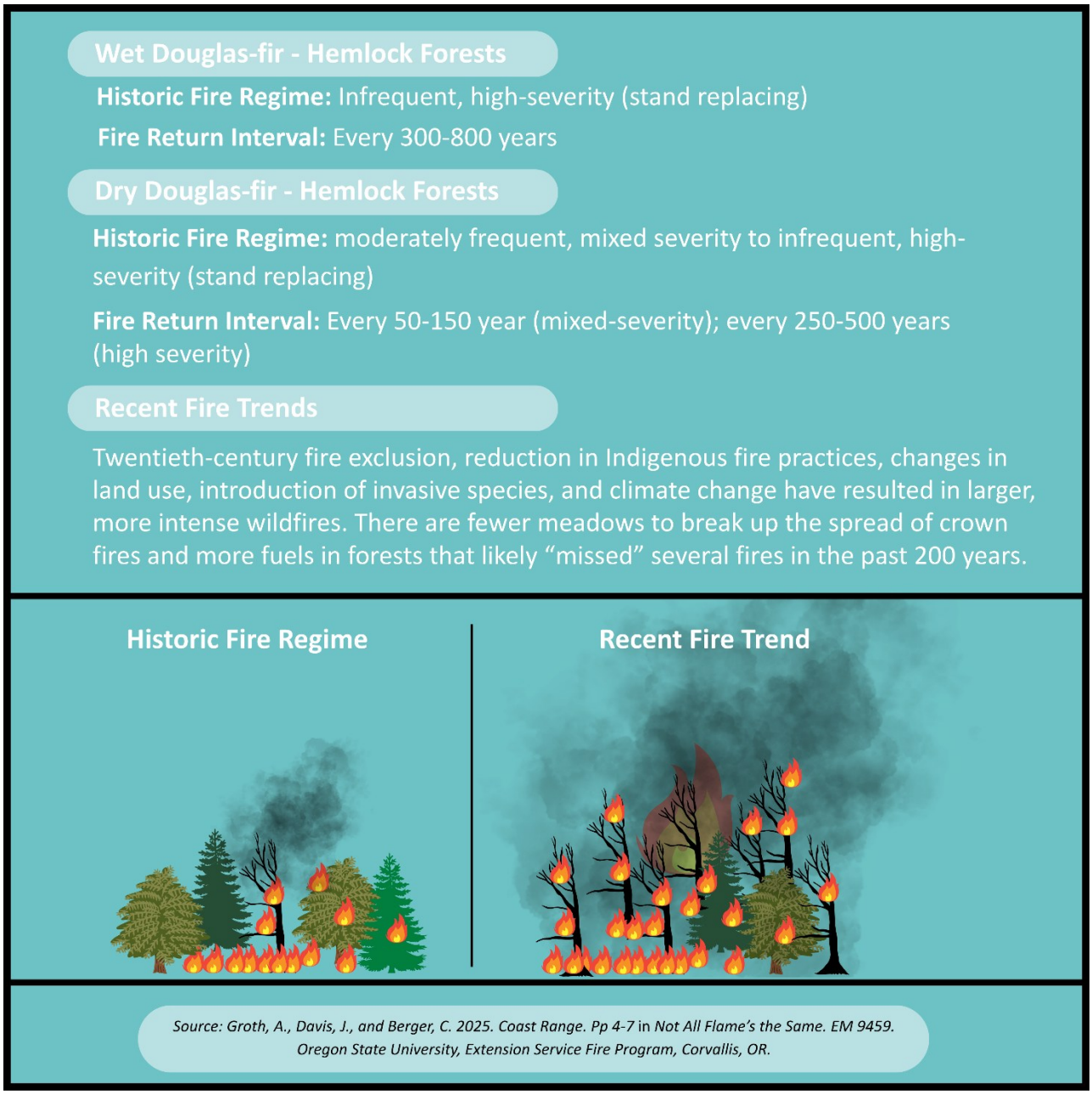


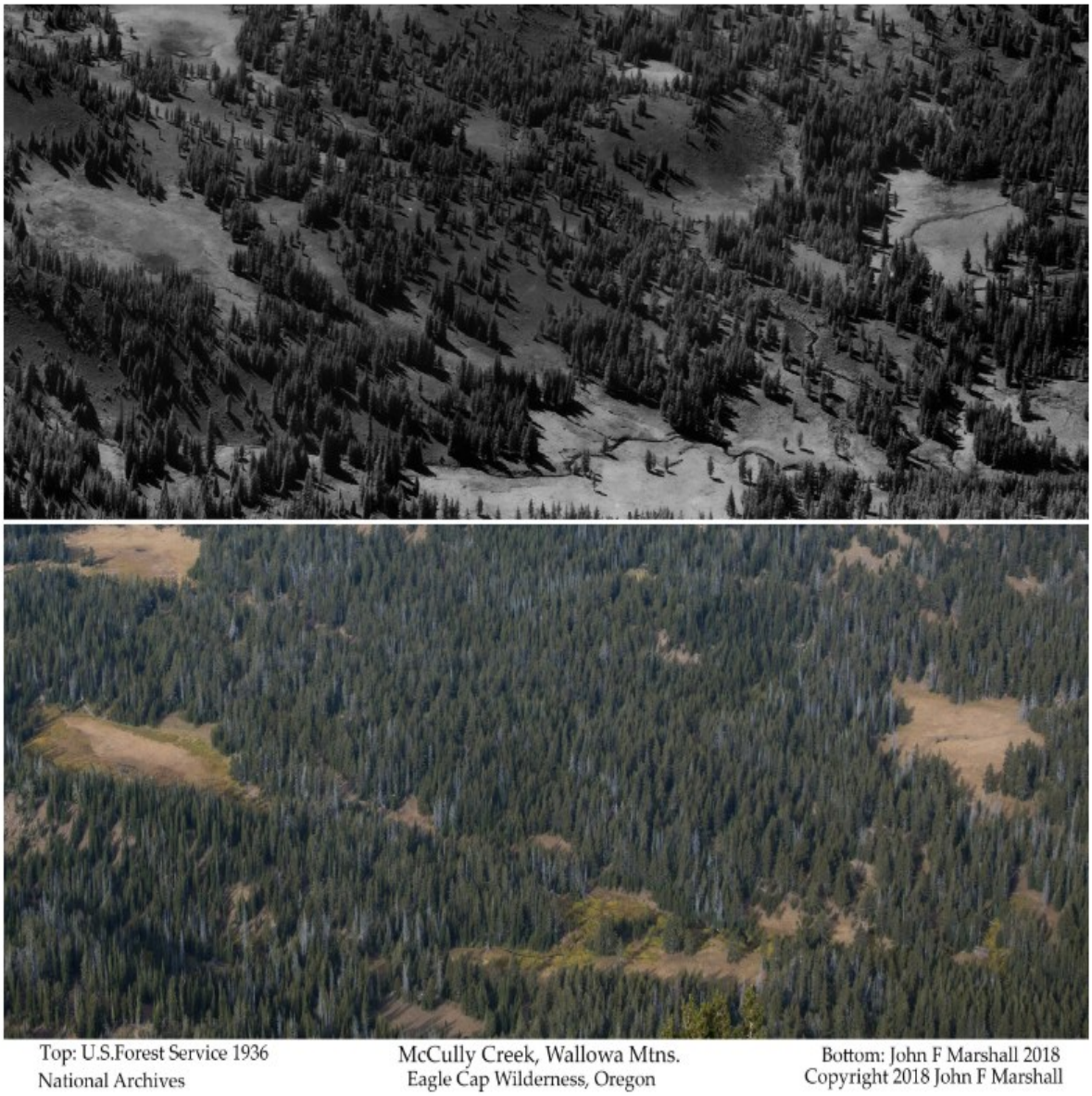
Figure 2.e.1. *Historic fire behavior in Douglas-fir – hemlock forests along the Coastal Range of Oregon ranged from moderately frequent, mixed-severity to infrequent, high-severity (stand-replacing) fires. Fire behavior has changed for many ecosystems, including Douglas-fir – hemlock forests, partially due to the suppression of wildfires for over a century. Source: (Groth et al., 2025).*

Fires in southwestern Oregon historically varied in size, and some parts of the landscape burned at moderate frequency, while others experienced long fire-free periods (Agee, J.K., 1993). An example is with the Moon Complex Fire which started in the Gold Beach Ranger District (Curry County) on September 3, 2025. The fire eventually made its way over Panther Ridge into the Powers Ranger District in southern Coos County. The cause was lightning in the southern Rogue River-Siskiyou National Forest which caused several fires near the Rogue River about 11 miles northeast of Agness, Oregon. Six of the fires comprising the Moon Complex were the Backbone, Brushy, Pinnacle, Tate, Paradise, and Stair Fires ("InciWeb," 2025). As of November 11, 2025, the containment had reached 90% and the fire had burned over 19,520 acres.

Topography and climate played an important role in determining fire frequency and severity. Areas closer to the coast have higher humidity and longer fire return intervals. Weather conditions conducive to large fire growth were uncommon, which resulted in longer fire-free intervals. Fire intensity was often intense when fires did occur, killing most of the trees, because high moisture conditions supported abundant growth of trees and understory vegetation and the accumulation of high fuel loads. Large patches of high-severity fire occurring during extreme drought or on hot days when strong, dry winds blew out of the east could resulted in synchronized regeneration of trees over large areas (Tepley et al., 2014); (Spies et al., 2018). Meadows and grasslands burned more frequently, and lower fuel loads in areas maintained by frequent fires and could break up the spread of intense wildfires (Groth et al., 2025).

Historically, occasional lightning ignitions and frequent indigenous burning near settlements or travel routes likely ignited small fires on a nearly annual basis. The cumulative area of these small fires would have been limited but they might have grown into very large fires on days with dry fuels and strong, dry winds (Reilly et al., 2021).

After Euro-American settlement in the mid-1800s, fire regimes and forest conditions changed, as can be seen in the following photo from the Eagle Cap Wilderness. Twentieth-century fire exclusion, reduction in Indigenous fire practices, changes in land use, introduction of invasive species, and climate change have resulted in larger, more intense wildfires. There are fewer meadows to break up the spread of crown fires and more fuels in forests that likely "missed" several fires in the past 200 years (Groth et al., 2025).



In some places, tree densities are higher and meadows more infrequent today than they were historically, as demonstrated by these paired photographs along the Eagle Cap Wilderness, Oregon. Source: (Marshall, J. and Hessburg, P., 2018)

In Coos County, the 1868 Coos Fire and 1936 Bandon Fires were the largest wildfires in recorded history in the county (**Figure 2.e.2**). There have been no large wildfires in Coos County since 1970; however, there is a potential for large wildfires in the county on days with hot, dry, and windy weather due to an abundance of ignitions from humans and lightning. There have been several smaller fires in the County, some of which impacted communities by destroying homes and businesses or inundating areas with smoke (**Table 2.e.1**). A combination of dense wildland vegetation, extreme heat and high winds, unplanned ignitions, and housing developments in the WUI can create catastrophic wildfire scenarios (Haas et al., 2015).

Wildland firefighters suppress 85% of ignitions in Coos County before they exceed 1 acre in size, but fires can escape the initial capacity of firefighters under high, dry, and windy conditions. A vast majority (94%) of ignitions in Coos County are human-caused, and most ignitions occur in July and August (**Figure 2.e.3**).

Highly flammable and invasive plants play an important and challenging role in exacerbating fire occurrence and behavior in Coos County. Gorse (*Ulex europaeus)* is a non-native plant in Oregon that competes with native species

and has fueled catastrophic fires due to its dense growth form with high fuel loads, and its waxy leaves with high oil content that easily ignite and burn hot (U.S. Department of Agriculture, 2024). In 1936, most of Bandon burned down, largely due to the growth of wildfire fueled by gorse on a day with high winds and humidity of only 5%. Gorse was also a factor in notable wildfires in Coos County in 1980, 1999, 2007, and 2015 (Coos County Sheriff's Office, 2023).

Additional invasive plants of concern in Coos County are scotch broom (*Cytisus scoparius*) and Armenian blackberry (*Rubus armeniacus*). Scotch broom leaves have oil and are highly flammable like gorse. Armenian blackberry can grow under trees and act as ladder fuels that carry wildfire from the surface into treetops. All three plants—gorse, scotch broom, and Armenian blackberry also produce abundant litter that can be highly flammable when it dries out.

Climate change is making high-severity wildfires more frequent, intense, and larger in extent (Parks et al., 2016). In Coos County, climate change is expected to increase the number, duration, and intensity of extreme heat events, increase the intensity of extreme precipitation events, and increase the frequency of drought conditions. In Coos County, the number of days with very high fire weather danger could increase by 11 days/year (range of 6-30 days/year) by 2050 (Dalton et al., 2022).

Bandon was nearly destroyed by wildfire in 1936 that was fueled in part by gorse. Numerous other larger wildfires burned across Coos County in 1936. Source: The Bandon Fire, 1936 | Bandon.

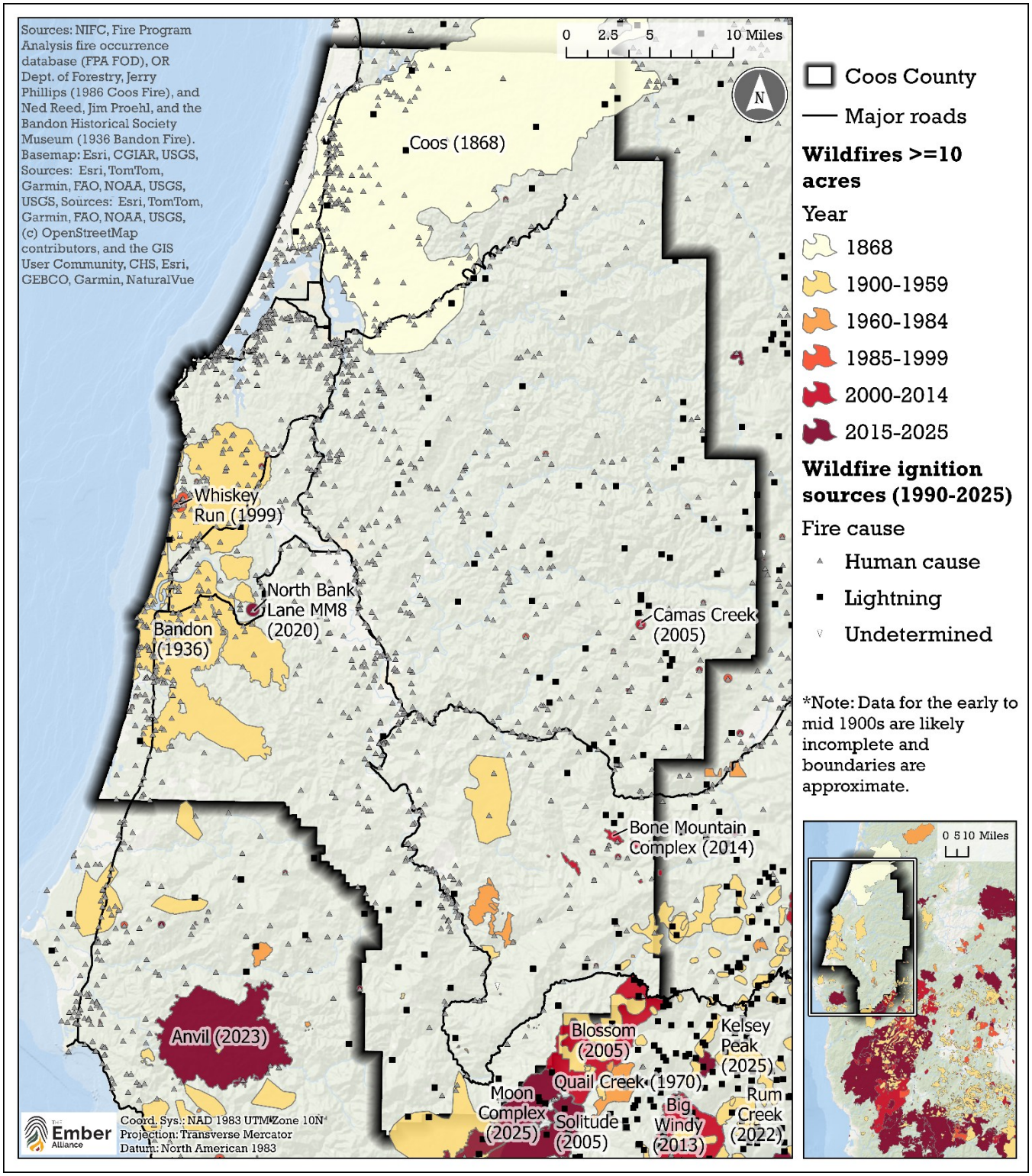


Figure 2.e.2. *The 1868 Coos Fire and 1936 Bandon Fires were the largest wildfires in recorded history in Coos County. There is a potential for large wildfires in the county on days with hot, dry, and windy weather due to an abundance of ignitions from humans and lightning. Sources: National Interagency Fire Center, FPA FOD, Oregon Dept. of Forestry, Jerry Phillips (1986 Coos Fire), and Ned Reed, Jim Proehl, and the Bandon Historical Society Museum (1936 Bandon Fire).*

Table 2.e.1. *Notable fires in and around Coos County. Source: (Coos County Sheriff's Office, 2023).*

Year	Name	Location	Size/Type	Description
2025	Moon Complex	Southern Coos County and northern Curry County	19,520 acres	Several lightning-caused wildfires that triggered evacuations in parts of Curry County, resulted in road and trail closures on the Rogue River Siskiyou National Forest, and impacted parts of Curry and Coos County with smoke.
2024	Cottom Creek Fire	Western Douglas County	204 acres	Smoke impacted the City of Coquille and other parts of Coos County. Several fire departments from Coos County assisted with response to fire.
2023	Flat Fire (Gold Beach)	Curry County	34,000 acres	
2023	Anvil Fire (port Orford)	Curry County	22,000 acres	
2022	Woodward Creek Fire	North of Powers County Park	15 acres	
2022	Trans Pacific Lane Fire	North Spit in North Bend	11 acres	Strong winds pushed smoke as far away as the City of Coquille.
2020	North Bank Road Fire	Bandon	350 acres	A fire began across the river from Hwy 42S and destroyed a house and farm.
2018	Klondike Fire	Curry County	Smoke: 200 ppm+	Coos County impacted with heavy smoke that affected the health of residents in the county.
2017	Chetco Bar Fire	Curry County	Smoke: 350 ppm+	Smoke inundated Coos County for approximately 3 weeks.
2015	Unnamed	Bandon area	Gorse-fueled fire	
2014	Bone Mountain Fire	Coos County	300 acres	Began as a prescribed fire, but due to extremely dry and windy weather, it escaped containment lines.
2014	Camas Creek Fire	Coos County	40 acres	
2007	Unnamed	Bandon area	Gorse-fueled fire	
2005	Camas Creek Fire	Coos County	178 acres	
1999	Whiskey Run Fire	Bandon area	Gorse-fueled fire	
1980	Unnamed	Coos County	Gorse-fueled fire	
1966	Ivers Peak	State Forest in Coos County	1,636 acres	
1965	Banner Peak	Coos County	1,860 acres	
1952	Williams River Fire	Coos County	2,679 acres	
1945	Waterfront Fire	Coos Bay	689 acres Urban fire	

Year	Name	Location	Size/Type	Description
1936	Unnamed	Bandon	Urban fire Gorse-fueled fire	Fire nearly destroyed Bandon and caused $1,000,000 in damages.
1936	Unnamed	Coos and Curry Counties	146,000 acres	Multiple fires burned across a large area. Temperatures reached 90 degrees and humidity dropped to 6%.
1921	Unnamed	Marshfield	Urban fire	Destroyed 12 businesses along Front Street and four residences.
1918	Unnamed	City of Coquille	Urban fire	Destroyed the City of Coquille.
1914	Unnamed	Bandon	Urban fire	Burned a 3-block area. Damages estimated at close to half a million dollars.
1882	Unnamed	City of Coquille	Urban fire	Destroyed businesses in Front Street Business District.
1872	Unnamed	Coos County	WUI fire	Fire burned from South Slough as far north as Coos Bay and west as Coalbank Slough.
1868	Unnamed	Coos Bay	296,000 acres	90% of Elliott State Forest burned, stopping only when it reached the ocean.

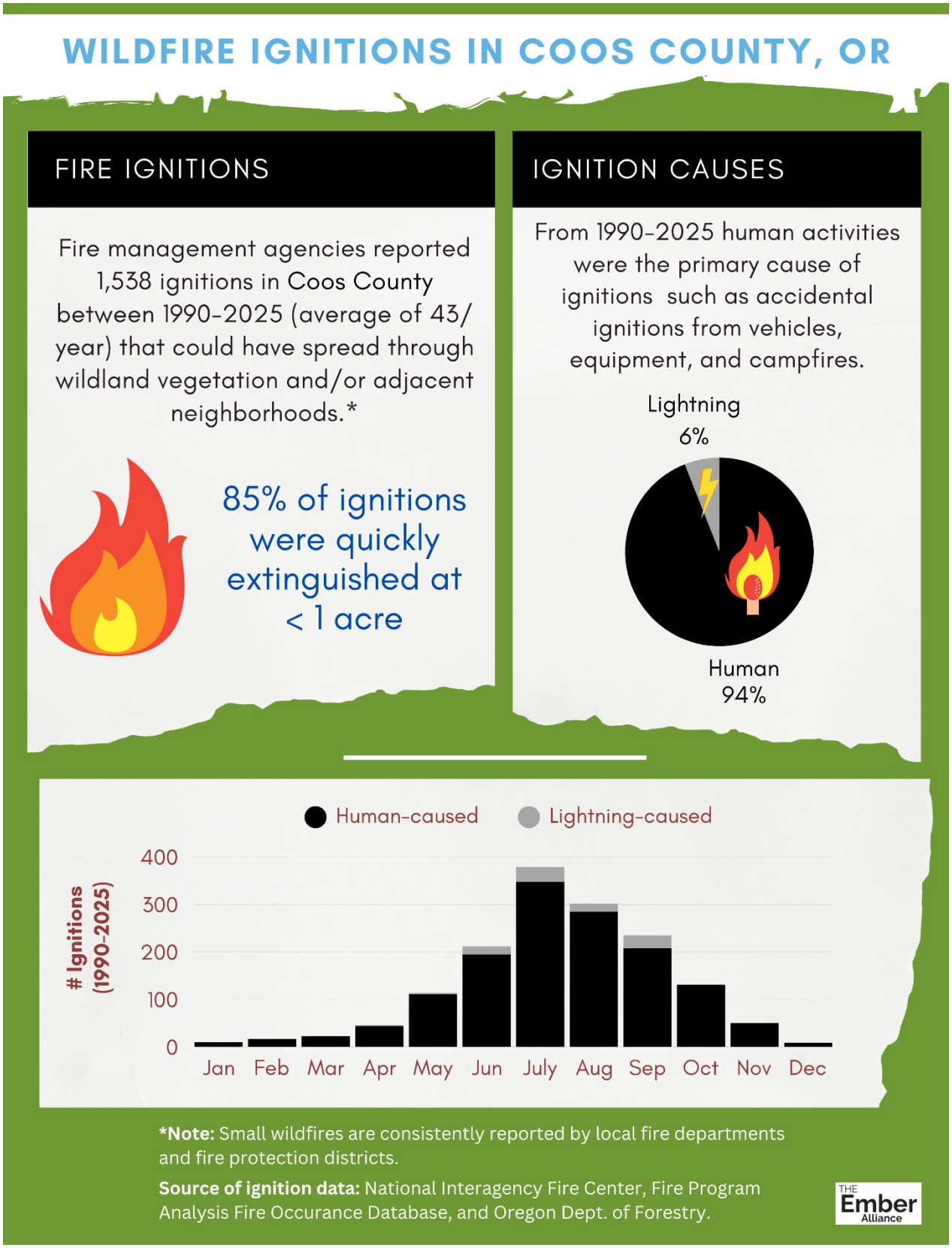


Figure 2.e.3. *Historic wildfire ignitions in Coos County, Oregon. Understanding when, why, and where ignitions occur can inform fire prevention campaigns and planning for firefighter staffing and equipment needs. Source: Infographic by The Ember Alliance.*

2.f. Potential Fire Behavior and Exposure in Coos County

According to the 2020 Wildfire Risk to Communities analysis by the U.S. Forest Service, homes in Coos County and the surrounding areas have a higher risk of fire than 60% of the communities in the state of Oregon. While wildfire risk is lower in Coos County than some other parts of Oregon, there is the potential for large fire growth and home loss on days with extremely hot, dry, and windy weather, such as was observed during the large 1868 Coos Fire and 1936 Bandon Fires. It is still important for residents, homeowners, businessowners, emergency managers, and land managers in Coos County to undertake proactive measures to mitigate wildfire risk to protect lives and property.

Residents in Coos County are highly concerned about wildfire risk. Based on the results from the public survey available to residents of Coos County, the top concerns to residents are loss of life or injury to first responders, pets, and/or livestock, and receiving timely notifications about a wildfire incident and evacuations (**Figure 2.f.1**). Fortunately, these concerns can be addressed through concerted efforts across the community to mitigate wildfire risk and increase emergency preparedness. **Implementing recommendations in this CWPP will go a long way towards helping Coos County become a more fire adapted community.**

"We do not want an extreme fire to be what educates the Coos County population about fire."

Aimeé Artigues ~ The Ember Alliance

Take Away Message

Parts of Coos Couty are at high risk for large, high-severity wildfires due to dense forest conditions, and dry and hot weather during the late summer and early fall. Days with warm and strong winds blowing out of the east are particularly concerning to wildland firefighters. Increasing drought and warming temperatures exacerbate wildfire risk in the area.

Proactive work by FPDs, Tribes, residents, and partners are imperative to protect lives and property.

Strong, gusty wind contributed to rapid growth of the 2020 North Bank Fire in Oregon. Photo credit: Chief Justin Ferren.

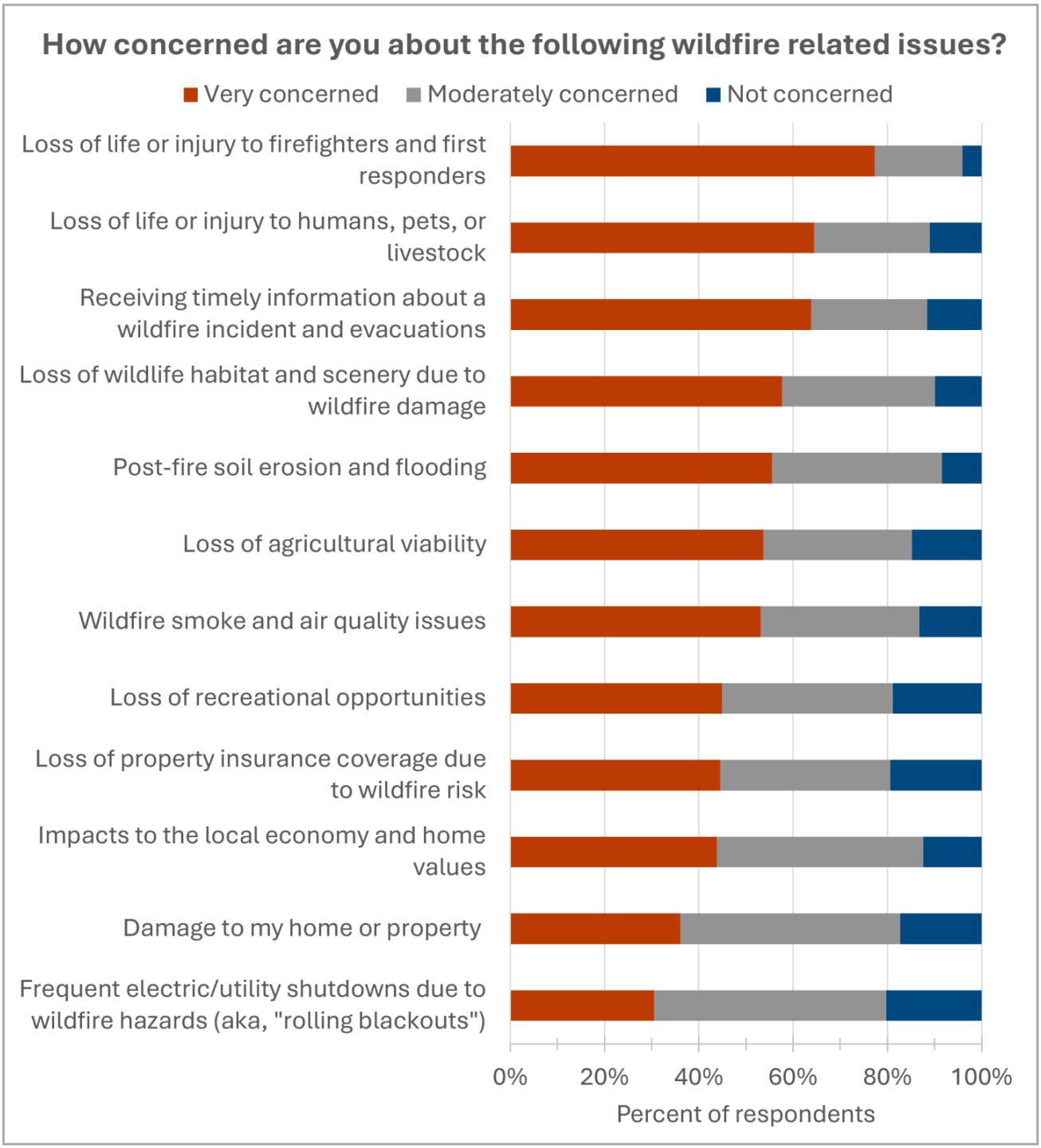


Figure 2.f.1. *Level of concern about wildfire impacts expressed by Coos County residents who responded to the CWPP survey. See 10 for a full summary of survey findings.*

Potential Fire Behavior

Topography and fuel conditions are highly variable across Coos County (**Figure 2.f.2**), and this variation, plus alignment between wind patterns and topography, help explain the patterns of potential fire behavior across the landscape.

Under high to extreme fire weather conditions ranging from hot, dry, and windy to extremely hot, dry, and windy, 35% percent of Coos County could experience high to extreme fire behavior (**Figure 2.f.3**). Very high to extreme fire behavior includes ember production that ignites additional fires away from the main fire and the movement of high-intensity fire from treetop to treetop. Such fires are extremely challenging if not impossible to control until winds die down and fuel moistures increase.

There is widespread potential for very high to extreme fire behavior in the eastern portion of Coos County due to the prevalence of steep slopes covered in dense forests, as well as higher temperatures and lower fuel moistures in the summer. Days with hot, dry winds blowing out of the east could create a situation that pushes intense, rapidly moving wildfires towards populated areas along the coast. Most large wildfires in western Oregon since 1900 have coincided with warm-dry summers and at least moderate east wind events (Abatzoglou et al., 2021).

In Coos County, the areas where fires are likely to grow the largest coincide with areas where the most limited firefighting resources are available for immediate response. This creates additional complexity by requiring resources from surrounding fire protection districts or even surrounding counties.

Fire risk is exacerbated by highly invasive and persistent noxious weeds in Coos County—gorse, Scotch broom, and Armenian blackberry. Gorse in particular grows in dense monocultures with high fuel loads and is highly flammable because oils contained in the plant's leaves easily ignite and burn hot (**Figure 2.f.4**) (U.S. Department of Agriculture, 2024). Fire behavior models cannot account for the exacerbating impact of gorse on wildfire predictions, so fire behavior predictions in parts of eastern Coos County are likely underestimated by the 2023 Pacific Northwest Quantitative Wildfire Risk Assessment (2023 PNW QWRA), which is the basis for fire behavior predictions in this CWPP.

Important Considerations about Fire Behavior Predictions

Fire behavior models can provide reasonable estimates of relative wildfire behavior across a landscape. However, wildfire behavior is complex, and models are a simplification of reality. Models also struggle to capture impacts of structures on wildfire spread and home-to-home ignitions. It is recommended to use fire behavior analyses at a landscape scale to assess relative risk across the entire Coos County.

The 2023 Pacific Northwest Quantitative Wildfire Risk Assessment (2023 PNW QWRA) was the basis for wildfire predictions in this CWPP. Two caveats to this high-quality analysis completed by Oregon State University and partners are that fire behavior models cannot adequately account for the potential for fire spread in developed areas or in areas heavily invaded by gorse or scotch broom.

Exceptional hot, dry, and windy conditions are increasingly common due to climate change and could result in even more extreme fire behavior across Coos County than predicted by this analysis.

See **Appendix B** for details on fire behavior modeling used for this CWPP.

Forest management in Coos County can influence fire behavior in several ways. Clearcutting can break up the continuity of dense forests and moderate fire behavior, but it depends on time since treatment (**Figure 2.f.5**). The potential for intense wildfire can be lower for 1-10 years after clearcutting and pile burning of slash, and then it increases after vegetation begins to regrow. Fire risk lowers again after about 25 years when trees are taller and begin to lose their lower limbs and shade the understory, which eliminates growth of grasses, forbs, and shrubs (Lindenmayer et al., 2009; Spies et al., 2018).

Figure 2.f.2. *Fuel loads and topography are variable across Coos County, ranging from dense forests with abundant ladder fuels (top) to highly flammable Gorse (middle) to open forests with widely spaced trees and few ladder fuels (bottom). Fuel type and fuel loads greatly influence fire behavior, intensity, and rate of spread. Photo credit: The Ember Alliance.*

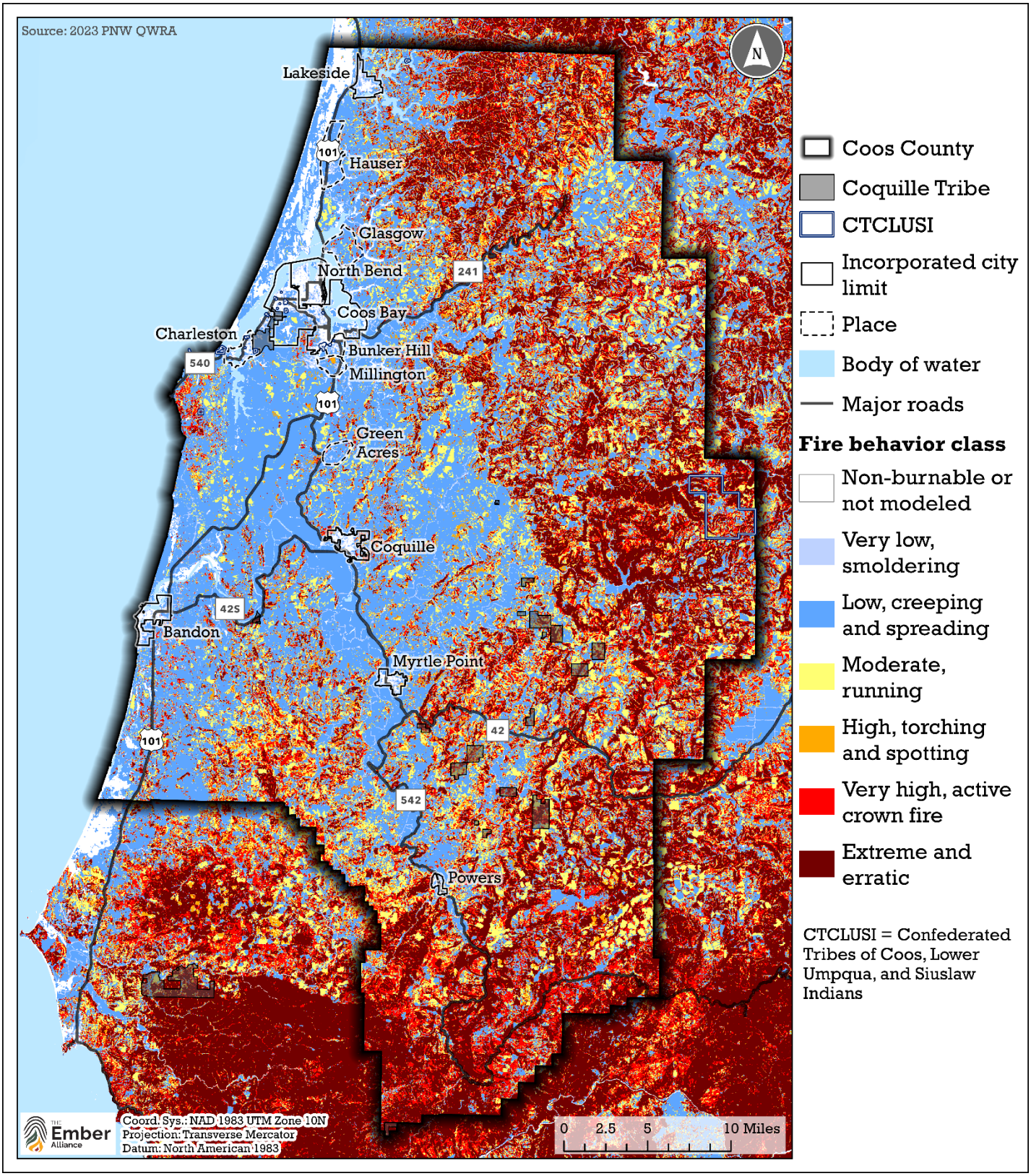


Figure 2.f.3. *Under high to extreme fire weather conditions ranging from hot, dry, and windy to extremely hot, dry, and windy, 35% percent of Coos County could experience high to extreme fire behavior. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

A picture of Gorse flowers, needles, and leaves. The entire plant contains large amounts of flammable oil.

Photo credit: The Ember Alliance.

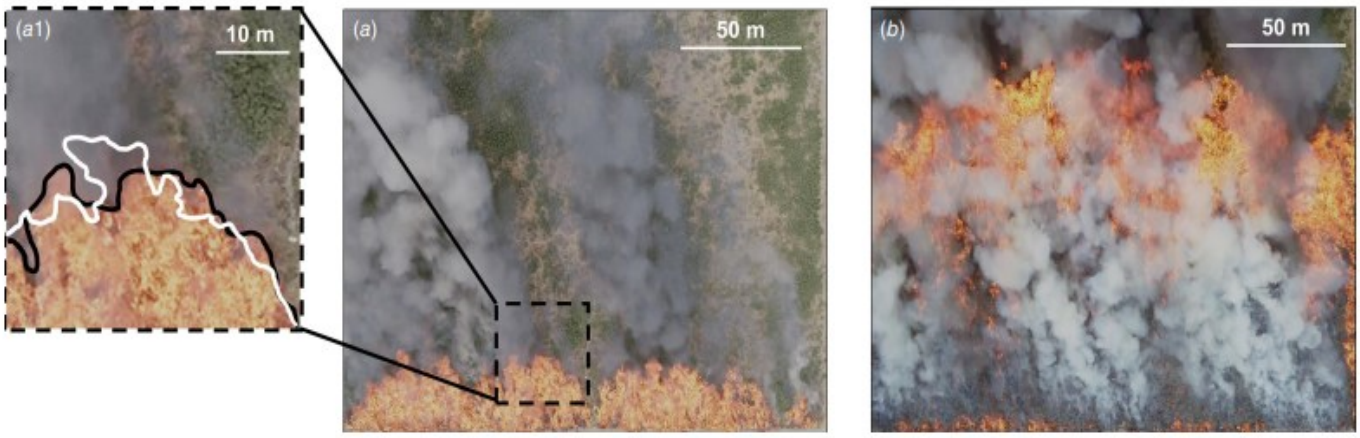


Figure 2.f.4. *Gorse burning as seen from above with a time-lapse of (a) approximately 1 min after ignition and (b) approximately 3 min after ignition. Source: (A. Valencia et al., 2023)*

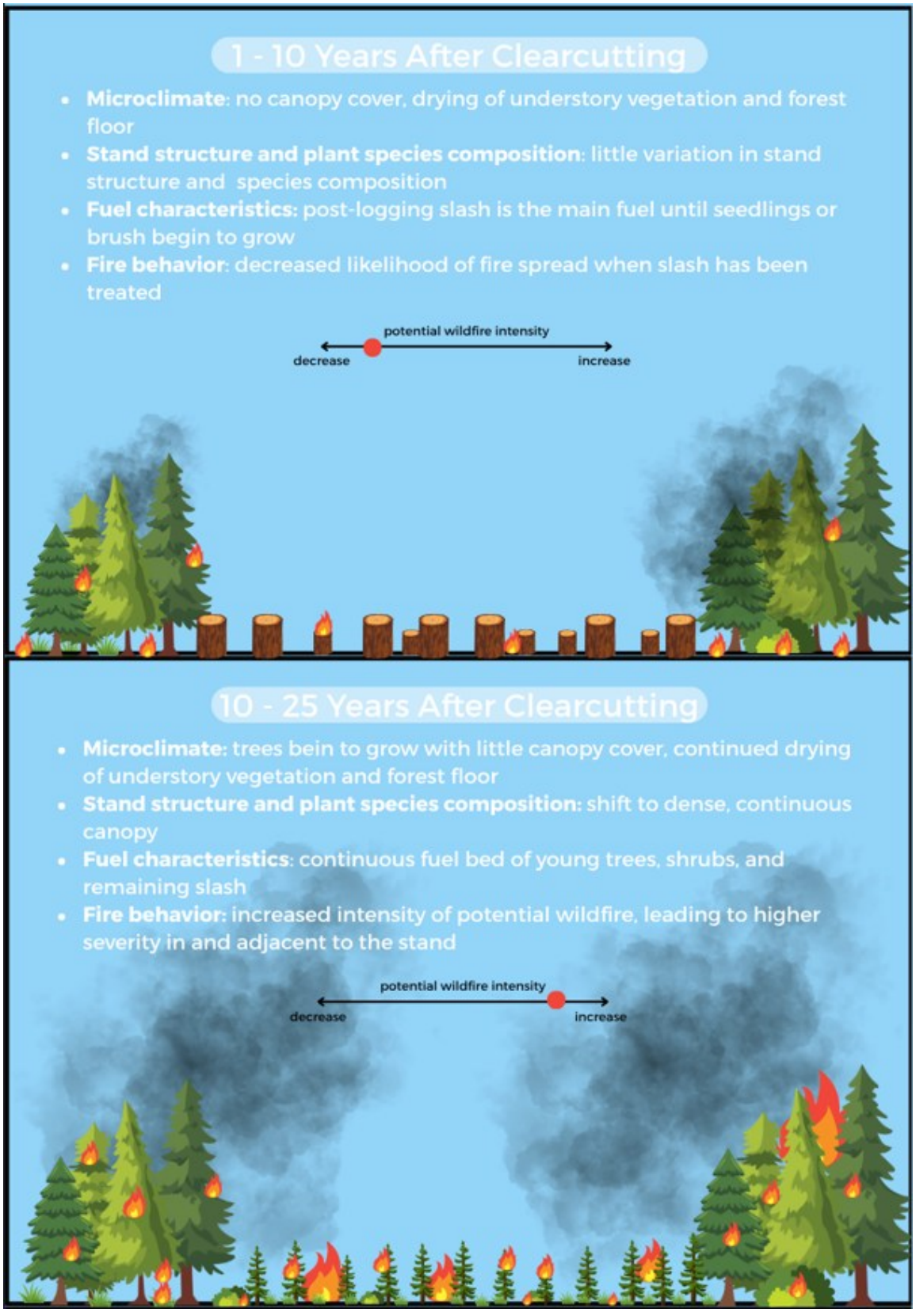


Figure 2.f.5. *Potential wildfire intensity within timber production areas after clearcutting. Source: Effects of logging on fire regimes in moist forests (Lindenmayer et al., 2009).*

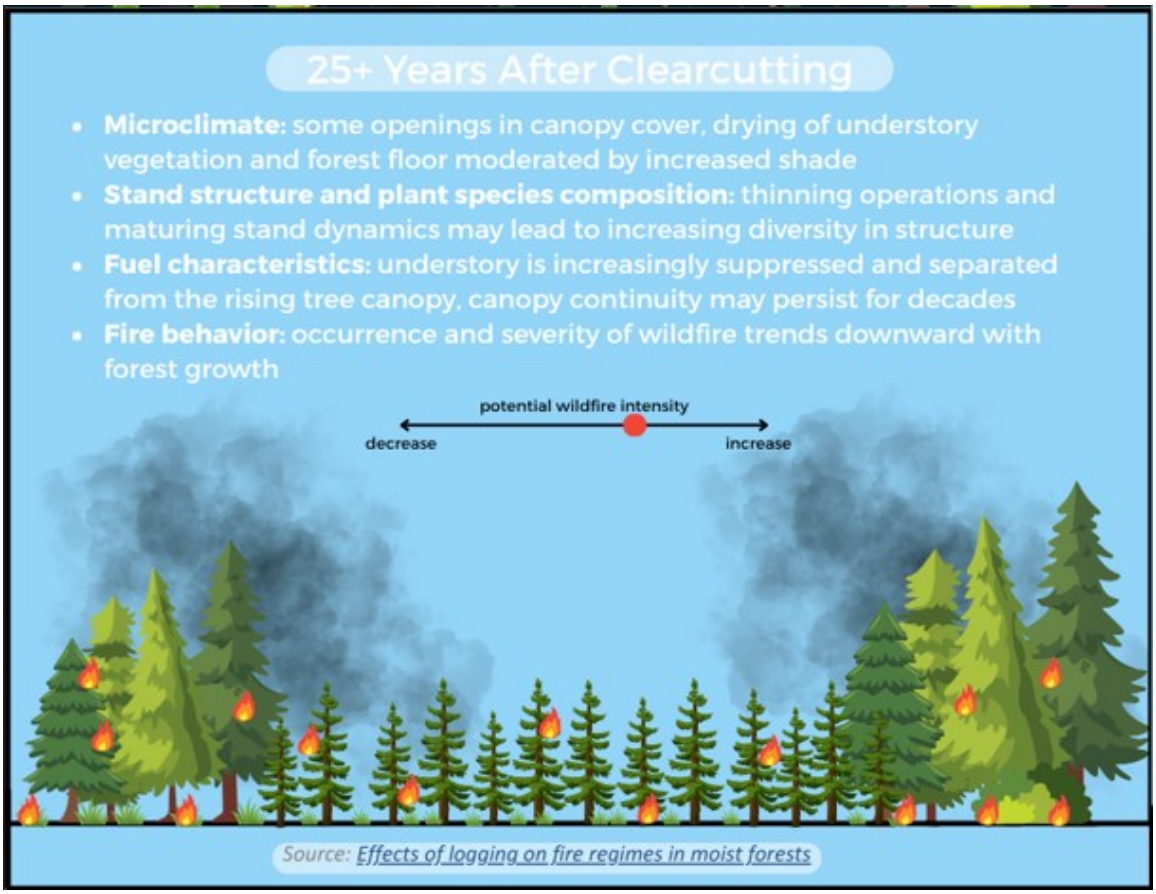


Figure 2.f.5 (continued). *Potential wildfire intensity within timber production areas after clearcutting. Source: Effects of logging on fire regimes in moist forests (Lindenmayer et al., 2009).*

Likelihood of Wildfire

Wildfire risk is composed of hazard (potential intensity of wildfire and likelihood of wildfire) and vulnerability (exposure of highly valued resources and their susceptibility to damage). Burn probability is the annual probability of any location burning due to wildfire. About a third of Coos County has low to moderate burn probability relative to the rest of the state of Oregon, with higher burn probabilities occurring to the southeast of the county (**Figure 2.f.6**). Relatively wet, and cool temperatures for much of the year result in higher fuel moistures and a lower chance for wildfires to ignite and grow larger than firefighters can rapidly suppress. Higher burn probabilities occur to the southeast of Coos County where temperatures and vapor pressure deficits are higher during the summer, making vegetation more likely to ignite and carry wildfires (**Figure 2.a.3**).

Another metric of the likelihood of wildfires is the frequency of days with weather conducive to large-scale fire growth. Days with red flag warnings indicate severe fire weather and the potential for exceptional fire growth and intensity. The occurrence of red flag warnings is highly variable in Coos County from year to year due to regional weather patterns and weather anomalies such as El Niño and La Niña. Coos County experiences on average 5 days with weather conditions that qualify as red flag warnings, with as many as 14 in 2017 (**Figure 2.f.7**). Red flag warnings are more likely for the eastern portion of the county and are more likely in July and August.

Although the likelihood of a large wildfire occurring in Coos County is lower than in other parts of Oregon, the potential still exists for the area to experience large wildfires. During a particularly hot, dry, and windy day in Coos County—especially a day with winds blowing out the east—there is abundant vegetation on steep slopes that could fuel a high-intensity and fast-moving wildfire. The frequency of hot and dry conditions is increasing in Coos County because of climate change.

A small wildfire burning near the Woodward Creek Area outside of Powers, OR in August 2022 was quickly suppressed by CFPA and local resources. Source: CFPA Facebook.

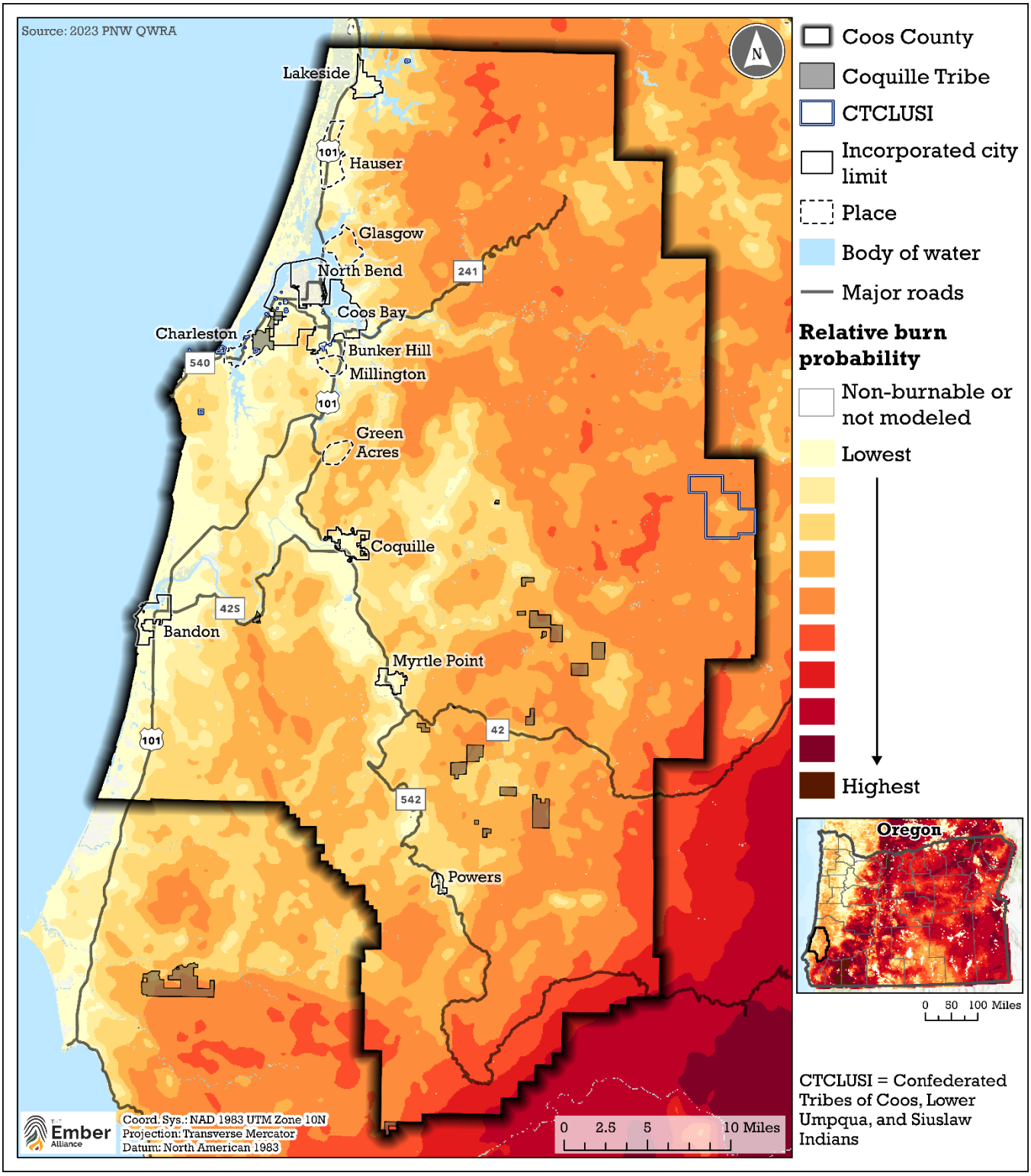


Figure 2.f.6. *About a third of Coos County has low to moderate burn probability relative to the rest of the state of Oregon, with higher burn probabilities occurring to the southeast of the county. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

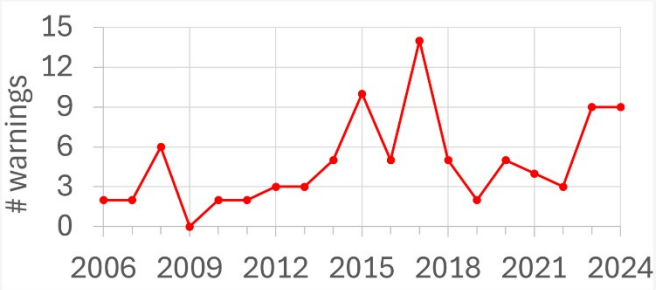
FIRE WEATHER DANGER IN COOS COUNTY

WHAT IS A RED FLAG WARNING?

Red flag warnings in Coos County are issued by the National Weather Service (NWS) Forecast Office in Medford, OR to indicate **high fire danger and increased probability of a quickly spreading fire in the area within 24 hours.**

WARNINGS FROM 2006-2024

The National Weather Service issued on average 5 red flag warnings/year for the fire weather zones that intersect Coos County, with as many as 14 in 2017.



Red flags most often occurred from **July to September** and in the **eastern and southern** parts of the county.

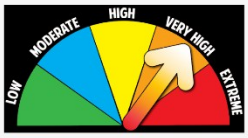
WHAT SHOULD YOU DO ON DAY WITH HIGH FIRE DANGER?

Follow regulations posted by Coos Forest Protective Association (CFPA): www.coosfpa.net/ . Permissible activities are limited during fire restrictions to protect the community.

- Do NOT conduct debris burning during fire season per CFPA regulations.
- Be alert and prepared to evacuate in case of a wildfire.
- Secure safety chains on trailers to prevent sparks.
- Don't drive or park over dry grass and other vegetation.
- Postpone target shooting.
- Avoid using mowers, welders, or power saws near dry vegetation.
- Report unsafe activity.

CLIMATE CHANGE MEANS MORE FIRE DANGER AHEAD

Hotter and dryer conditions could result in **11 more days/ year** (range of 6-30) with very high fire weather danger in Coos County by 2050.



National Fire Danger Ratings are different from red flag warnings but use similar indicators of severe fire weather.

THE Ember Alliance

Sources: Environmental Mesonet at Iowa State University, Oregon State University Extension, and (Dalton et al., 2022).

Figure 2.f.7. *Coos County experiences on average 5 red flag warnings per year, and climate change could further increase the number of days with very high fire weather danger by 11 days (range of 6-30 days) per year by 2050. Sources: Iowa Environmental Mesonet, Oregon State University Extension, and (Dalton et al., 2022). Infographic by The Ember Alliance.*

Potential Consequences to the Community

Many neighborhoods in Coos County could experience extreme fire behavior that could put the lives of residents, visitors, and firefighters at risk. In addition, smoke from wildfire could impact residents across the county depending on the location of the fire, wind direction, and smoke dispersal. Limited road access in and out of some neighborhoods, large amounts of flammable gorse and Scotch broom, and flammable building material contribute to this dangerous situation. **There is an immediate need for this community to undertake proactive measures to mitigate wildfire risk to protect lives and property.**

Smoke can impact communities across Coos County even if they are far away from the flaming front, as was the case with the 2024 Bottom Creek Fire in Douglas County. Source: CIRA and RAMMB.

Almost one-third of primary structures (30%) in Coos County could be exposed to wildfire under high fire weather conditions, and this percentage increases to 82% under extreme fire weather conditions (**Figure 2.f.8**). The most prevalent type of exposure is to long-range embers, but many homes scattered across the county could also experience abundant short-range embers and damaging radiant heat under extreme fire weather (**Figure 2.f.9**). The closer structures are to sources of ember production, the greater density of embers received and greater chance of ignition (Caton et al., 2016). Potential exposure of homes to radiant heat and/or ember cast is particularly high in Allegany, Bridge RFPD, Dora-Sitkum RFPD, Powers FD, the outskirts of Powers, along Daniels Creek and S Coos River Lane, and along Seven Devils Road.

Several community lifelines could also be exposed to damaging wildfire, including several schools and fire stations (see **Appendix B**). Fuel treatments and other recommendations in this CWPP seek to reduce this exposure and protect critical resources in Coos County.

Homes serve as an additional source of fuel that could produce high-intensity flames, emit embers, and initiate home-to-home ignitions. About 50% of primary structures in Coos County that could receive embers from burning vegetation have a high potential for structure-to-structure ignitions. Homes in densely populated parts of Lakeside, North Bend, Coos Bay, Charleston, Bunker Hill, Coquille, Bandon, Myrtle Point, and Powers are especially vulnerable for structure-to-structure ignitions (see **Appendix B**). This CWPP outlines defensible space and home hardening practices that residents and business owners can complete to reduce the risk of embers penetrating their homes.

High to extreme fire behavior can create non-survivable conditions along roadways, which is of particular concern in parts of Coos County where there are few points of egress for an evacuation. Under high fire weather conditions, 28% of the roads in Coos County could experience non-survivable conditions, and this percentage rises to 30% under extreme fire weather conditions (**Figure 2.f.10**). There are numerous areas within the county where limited egress routes and high home densities create concerns for efficient and safe evacuations. Evacuation preparedness is of the utmost importance for residents in neighborhoods with hazardous conditions along roadways (see **Evacuation Preparedness**).

While it is always a good idea to invest in defensible space and home hardening for residents in the WUI, it is equally important to understand the limitations these steps have in certain environments. Relying on those actions or expecting the fire department to be able to protect your home and family is naïve in these extreme danger scenarios. Major coordinated actions across the community are needed to make conditions safer for everyone.

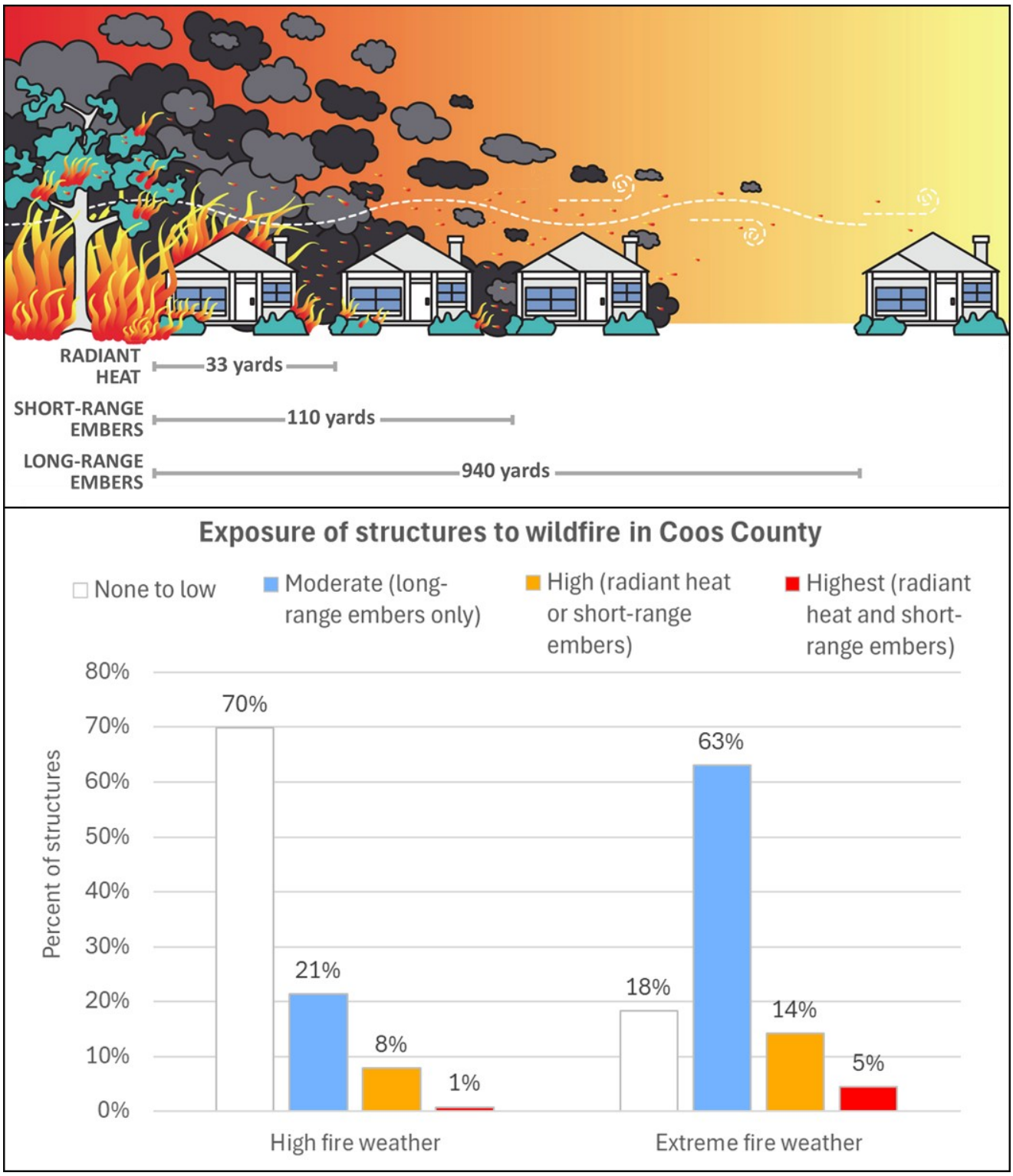


Figure 2.f.8. *Percentage of primary structures in Coos County with different types of exposure to wildfire under high or extreme fire weather conditions. Radiant heat from burning vegetation can ignite nearby homes, and embers emitted from burning vegetation or other homes can travel long distances and ignite vegetation and homes away from the main fire. Source: Analysis by TEA based on research by Beverly et al., (2010) and (Caggiano et al., 2020)(see* ***Appendix B*** *for details). Image modified from Reducing Brushfires Risks by the Victorian Auditor-General's Office.*

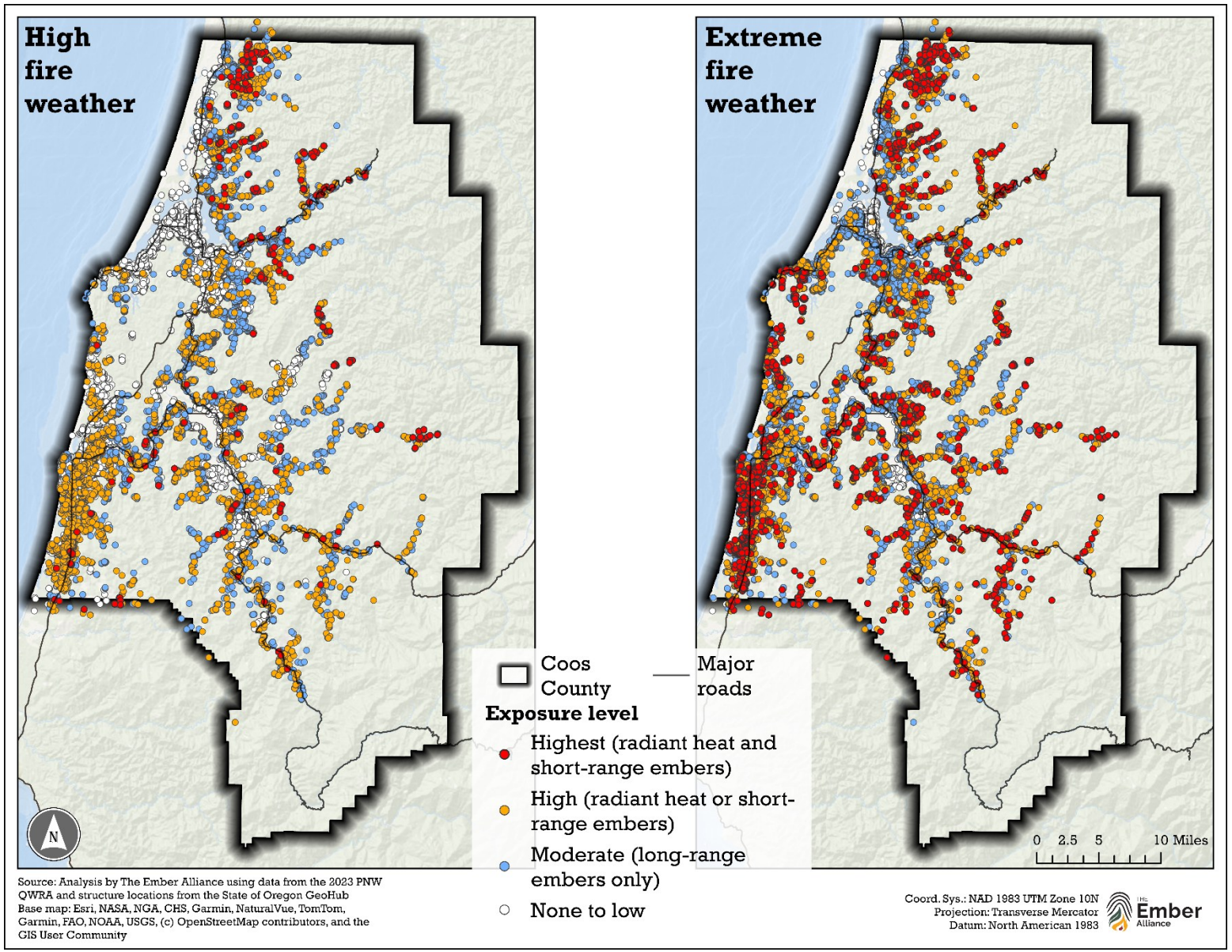


Figure 2.f.9. *Structures with high to highest exposure to wildfire (i.e., potential to experience radiant heat and/or abundant short-range embers) are scattered across Coos County. A greater number of homes could be exposed to wildfire on days with extreme fire weather. Source: Analysis by The Ember Alliance using data from the 2023 PNW QWRA. See Appendix B for methodology.*

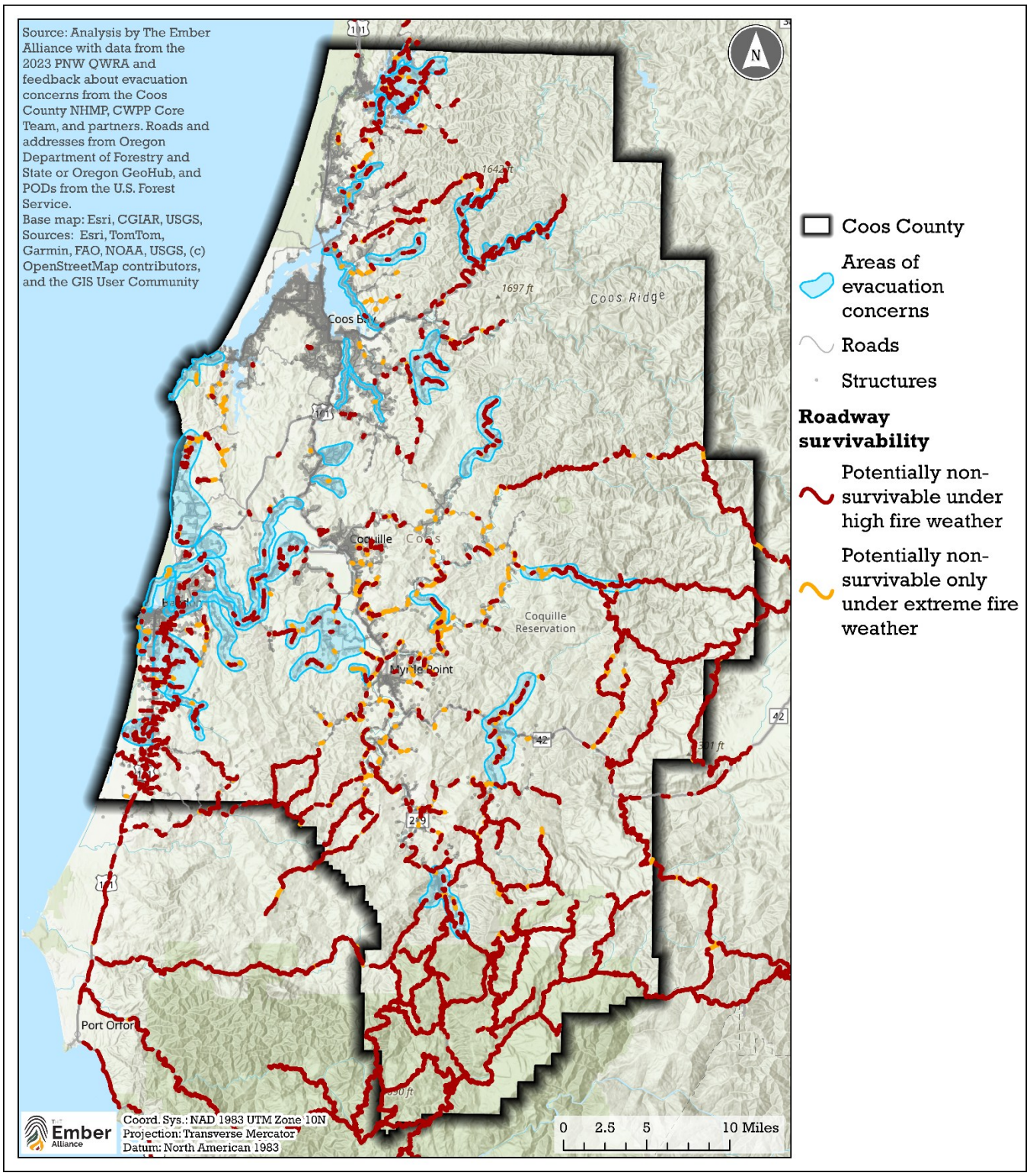


Figure 2.f.10. *During days with high fire weather danger, 28% of roads in Coos County could potentially experience non-survivable conditions during wildfires (i.e., flame lengths over 8 feet). This percentage rises to 30% under extreme fire weather conditions. There are numerous areas within the county where limited egress routes and high home densities create concerns for efficient and safe evacuations. Source: Analysis by The Ember Alliance using data from the 2023 PNW QWRA and feedback on evacuation concerns from the Coos County NHMP, CWPP Core Team, and partners. See Appendix B for methodology.*

Potential Benefits of Wildfire

Keep in mind that not all wildfire is damaging and destructive. Many ecosystems in Coos County have been shaped by wildfire for centuries, and wildfire creates important habitat for wildlife by removing trees, allowing for more sunlight, and promoting the growth of a diversity of grasses and forbs. Areas burned by wildfires can serve as fuel breaks for decades afterwards and reduce the potential for damaging wildfire both in the burned area and surrounding landscape. Some wildlife benefit from recently burned ecosystems with lower tree densities and a thus, more sunshine and a greater abundance of understory plants (Kalies et al., 2012; Pilliod et al., 2006).

According to the 2023 PNW QWRA, wildfire could benefit portions of Coos County by restoring ecological conditions and reducing fuel loads. Beneficial fire is more likely in areas without homes and where expected fire behavior is moderate (**Figure 2.f.11**).

Broadcast prescribed burning and cultural burning can also result in positive benefits in some areas by brining fire back to the landscape. Broadcast prescribed burning is often the most effective method to mitigate wildfire risk and create healthy conditions in a variety of grassland, shrubland, and forest ecosystems (Davis et al., 2024; Paysen et al., 2000; Stephens et al., 2009). This method has unique impacts on vegetation, soils, and wildlife habitat that cannot be replicated by mechanical treatments alone (McIver et al., 2013). Prescribed burning mimics naturally occurring wildfire, can treat hundreds of acres at a time, removes surface fuel, and is relatively cost-effective (Hartsough et al., 2008; Hunter et al., 2007). Prescribed burns can reduce property damage during wildfires because they are so effective at reducing fuel loads (Loomis et al., 2019).

Indigenous peoples have practiced cultural burning for millennia for various reasons, including to maintain travel corridors, improve wildlife habitat, improve water quality and quantity, control pests, steward cultural plants, and conduct spiritual, religious, or community ceremonies (Clark et al., 2024; National Park Service, 2024). Indigenous cultural burning practices are distinguished from broadcast prescribed burning through their connection to Tribal or Traditional Indigenous laws, objectives, outcomes, and the right to burn (Clark et al., 2024). Cultural burning is identified as an important form of stewardship in the 2025 Coquille Resilience Management Plan (Coquille Indian Tribe, 2025), stewardship agreement between the CTCLUSI and U.S. Forest Service (CTCLUSI and USFS, 2024), and the 2023 National Cohesive Wildland Fire Management Strategy Addendum Update. Learn more about broadcast prescribed burning and cultural burning in **Section 4.a**.

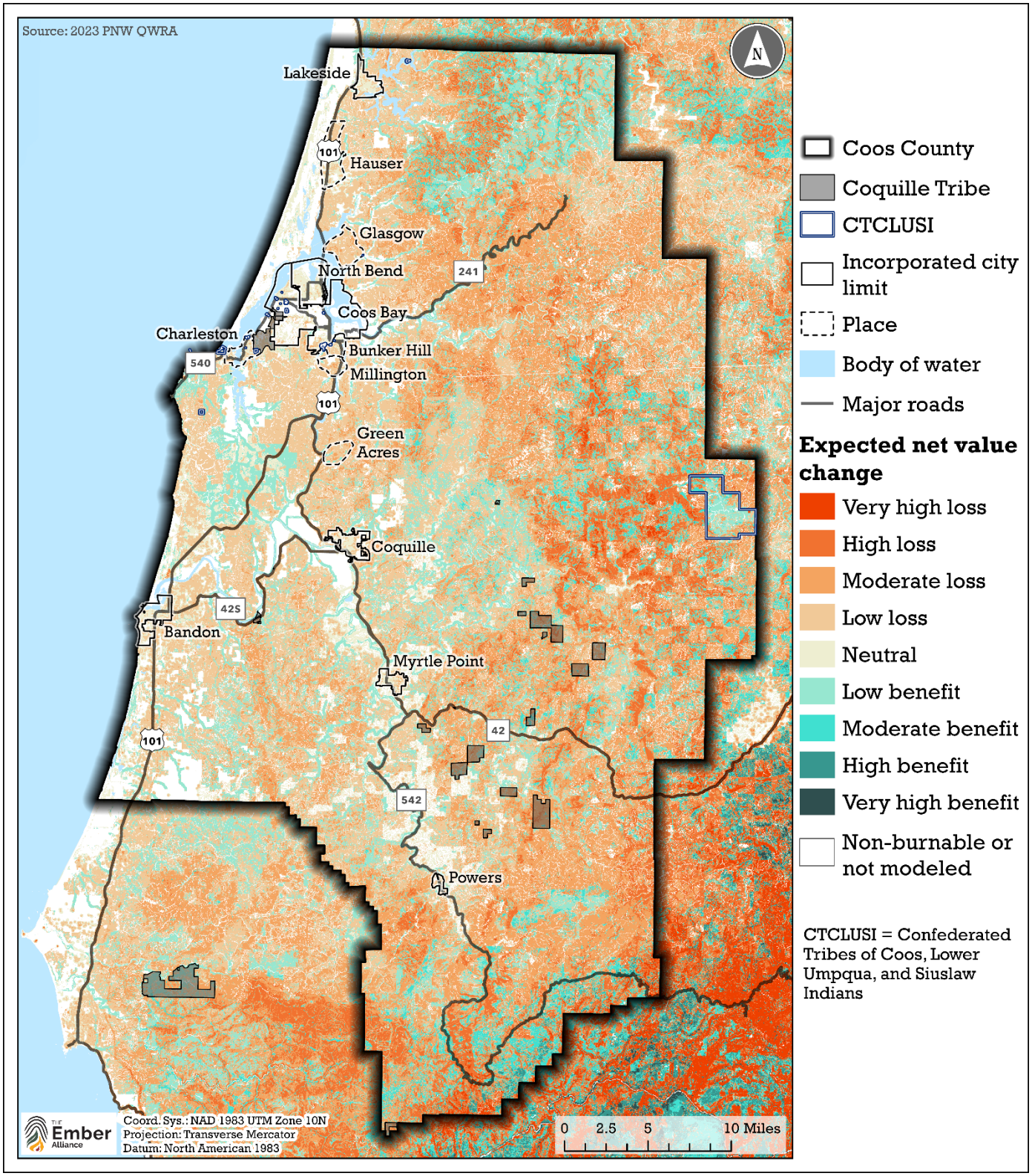


Figure 2.f.11 *Wildfire could moderately benefit portions of Coos County by restoring ecological conditions and reducing fuel loads, especially in areas without homes and where expected fire behavior is moderate. Wildfires can create diverse conditions on the landscape, improve habitat for some wildlife species, and reduce the potential for damaging wildfire in the coming years. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

Post-Fire Impacts

Impacts of wildfires do not end once the flames are extinguished. Intense rainfall events can result in flash floods, erosion, sediment delivery and debris flows the first few years following a wildfire (Neary et al., 2005). It is very possible that a large storm in the years following a high-intensity wildfire in Coos County could result in high to extreme sedimentation along the rivers and creeks. Many of these areas are important for fish habitat and retaining sediment to protect downstream water users.

Erosion and sedimentation are natural processes that shape streams, transport soil and nutrients across a landscape and create diversity in streams and riparian habitats (Prettyman, 2018). However, extreme post-fire sediment delivery and debris flows can damage and destroy homes, community assets, infrastructure, fisheries, and riparian vegetation. In addition to post-fire sedimentation, wind erosion can also increase after wildfires due to the removal of vegetation and leaf litter.

Post-fire erosion and sedimentation can be especially concerning in watersheds with high value for clean surface drinking water. Many of the watersheds in Coos County have high relative importance compared to the rest of the state of Oregon (**Figure 2.f.12**). Post-fire damage to drinking water supply can be harmful to communities and expensive to fix. The Oregon Office of Emergency Management estimated that damages caused by the 2020 Oregon wildfires in the counties of Clackamas, Douglas, Jackson, Klamath, Lane, Lincoln, Linn, and Marion cost a total of $310.9 million in debris removal, $1.4 million to repair water control facilities, and $24.7 million to repair utilities (Oregon Office of Emergency Management, 2020).

The potential for post-fire erosion and extensive mitigation costs is a reality in Coos County. The county has a high suseptibility for landslides due to topography, soils, and rainfall patterns (U.S. Geological Survey, 2024). These impacts can be mitigated through activities to improve stream health and resilience, strategic fuel treatments to reduce fire hazards, and pre-planning for emergency response. Several of these actions are recommended and further described in this CWPP.

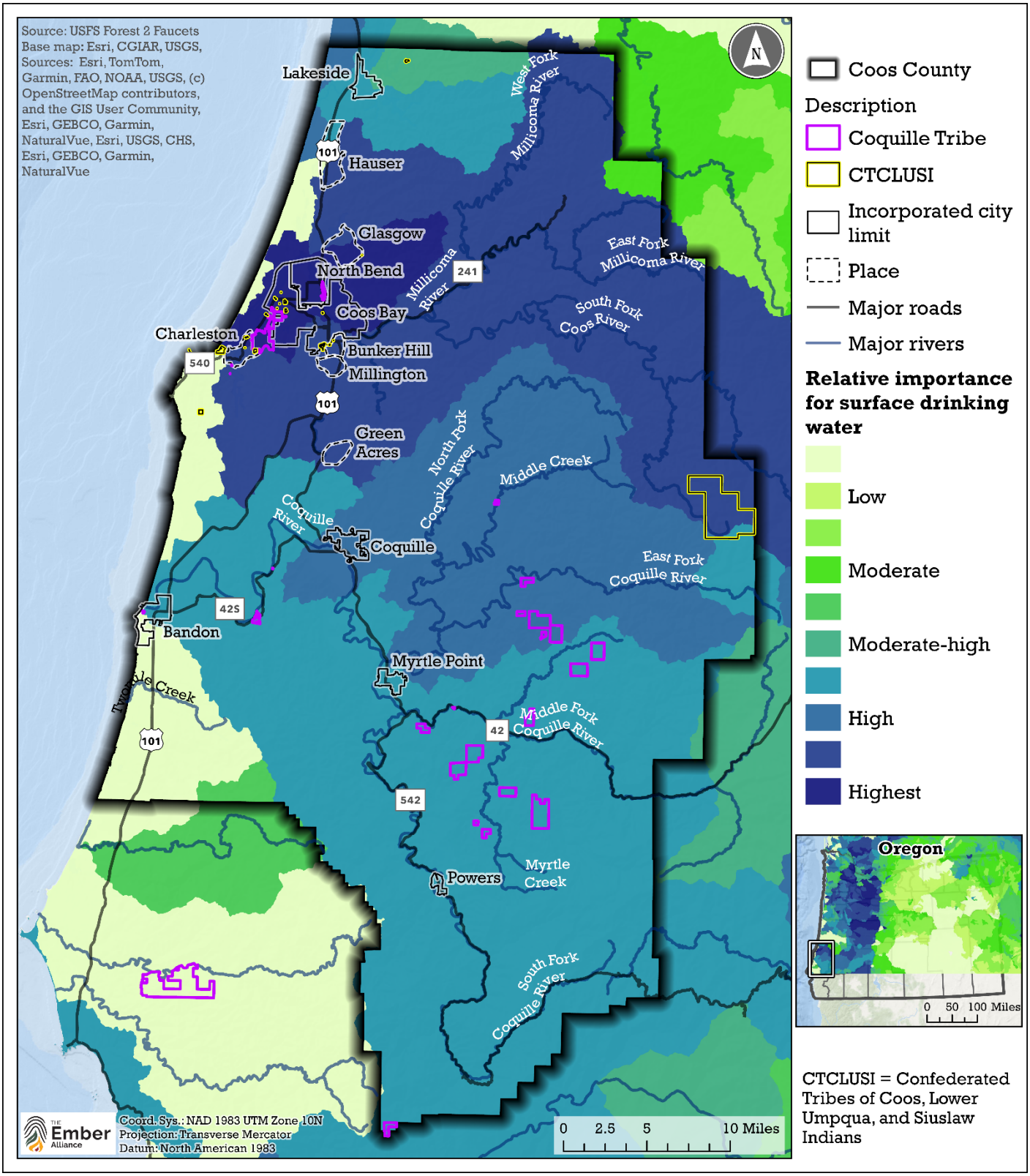


Figure 2.f.12. *Many watersheds in Coos County have a high value for surface drinking water. This CWPP recommends several proactive actions to mitigate potential post-fire impacts that could damage public drinking supplies. Source: U.S. Forest Service Forests to Faucets 2.0.*

2.g. Relative Risk Ratings

The CWPP includes a comparison of risk for all 22 fire departments within Coos County, the CTCLUSI land known as the Tioga Tract, the Coquille Reservation (Kilkich), and six areas with clusters of structures that are not currently protected by a fire protection district. Overall relative risk was assessed in addition to relative risk on four categories: potential fire behavior, potential structure exposure, wildland fire suppression challenges, and evacuation challenges. Ratings were based on fire behavior and structure exposure analyses and feedback from the CWPP Steering Committee on evacuation challenges in the County. See **Appendix B** for a description of hazard rating methodology. Relative risk ratings are specific to Coos County and not suitable for comparing to other communities in Oregon or the country.

The purpose of the relative risk maps and **Table B.5** in **Appendix B** is to show where there is the greatest risk from wildfire in the county and to help guide prioritization of funding, effort, staffing, etc., to address the specific type of risk in each FPD. For example, some areas have a lower potential for extreme fire behavior, so large-scale fuel treatments might not be warranted, but if there is potential for structure exposure from embers, home hardening might be a priority. In other areas, evacuation challenges are high so a focus should be on educating residents about evacuation protocol and treating fuels along roads.

The potential for wildfires to pose a threat to lives and property is variable across Coos County, with relative risk being higher in the eastern part of the County where there is a greater potential for more extreme fire behavior and exposure of structures (**Figure 2.g.1**). The relative risk for the CTCLUSI land is moderate even though it is in the far eastern portion of the County and has a high potential for extreme fire behavior, but the lands have no homes and therefore no potential for structure exposure or evacuation challenges. Relative risk is lower in North Bend FD and Myrtle Point RFPD where there is less potential for extreme fire behavior and therefore less potential structure exposure.

Some fire protection districts have lower risk in some categories and higher risk in others, which can help target specific actions needed to address risk in those FPDs (**Figure 2.g.2**). For example, Bandon RFD has an overall high relative risk largely due to high potential for structure exposure and evacuation challenges, but it has lower wildland fire suppression challenges due to flatter terrain and greater accessibility for firefighters relative to other parts of the County due to a wide road network. Areas with higher relative risk are strong candidates for immediate action to mitigate hazardous conditions. However, areas with moderate relative risk still possess conditions that could threaten life and/or property in the case of a wildfire.

Of particular concern is that some areas with elevated potential for structure exposure are not currently within a fire protection district and therefore are not guaranteed structure protection during wildfire. A key recommendation for these areas is to annex into existing fire protection districts or form new FPDs. Fortunately, residents in one of the areas in concern along Fairview Road have recently been annexed into the Fairview FPD with a ballot measure that was passed in November 2025.

See **Table B.5** in **Appendix B** for the overall and category-specific relative risk ratings and a description of specific challenges and hazards in all FPDs, reservations, lands, and unprotected areas across Coos County.

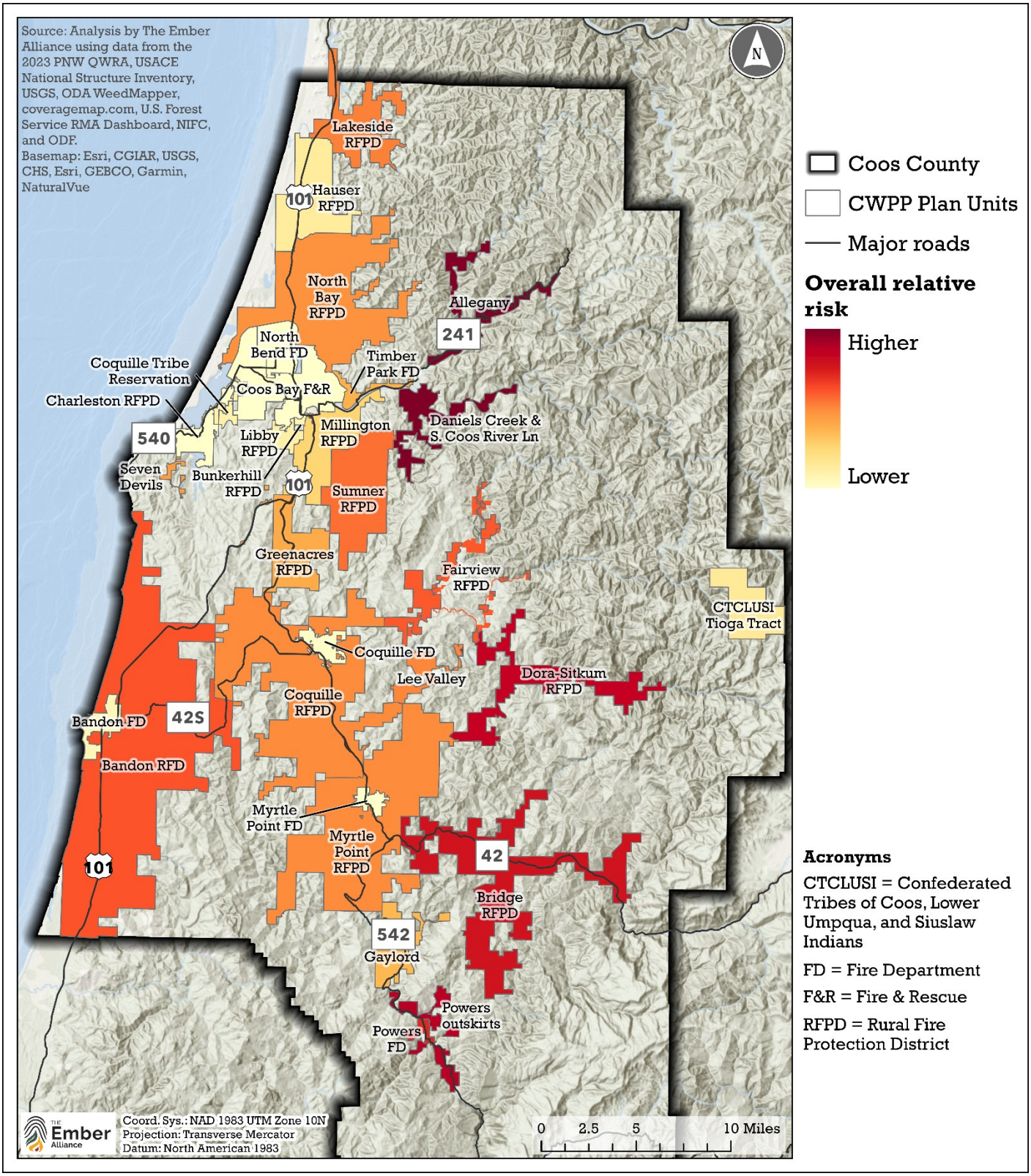


Figure 2.g.1*. Relative risk rating for FPDs, Tribal lands, and unprotected areas across Coos County. Source: Analysis by The Ember Alliance using data from the 2023 PNW QWRA, ODA WeedMapper, U.S. Forest Service RMA Dashboard, and other sources. See* ***Appendix B*** *for methodology and a description of specific hazards in each area.*

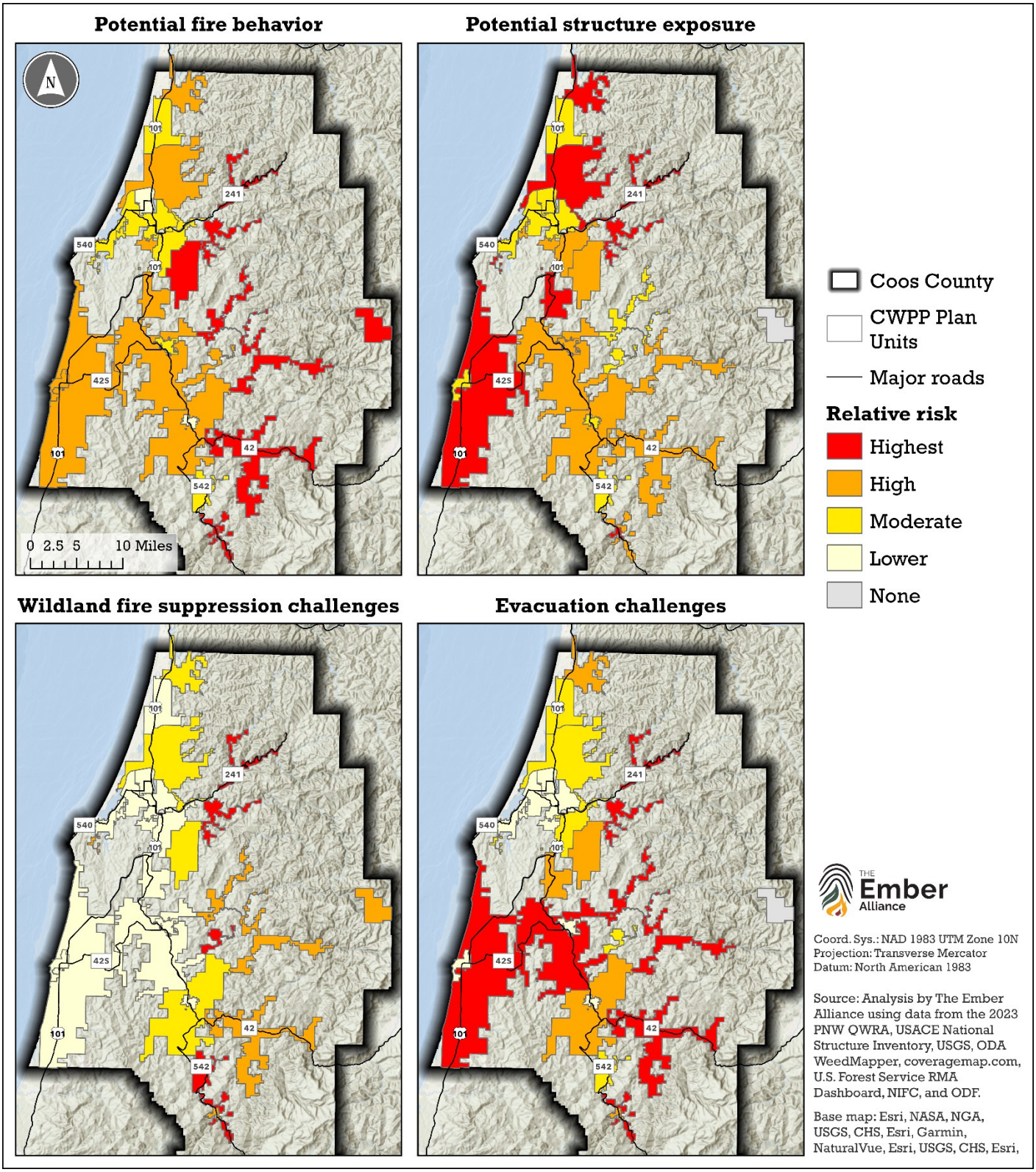


***Figure 2.g.2**. Relative risk ratings by category for FPDs, Tribal lands, and unprotected areas across Coos County. See **Appendix B** for methodology and a description of specific hazards in each area.*

3. Becoming a Fire Adapted Community

It is recommended that Coos County, HOAs, and residents embrace the concept of fire adapted communities (FAC), which is defined by the National Wildfire Coordinating Group as "a human community consisting of informed and prepared citizens collaboratively planning and taking action to safely coexist with wildland fire". This concept can guide residents, fire practitioners, and communities through a holistic approach to become more resilient to fire (**Figure 3.1**).

Your community's CWPP sets the stage for fire adaptation, and the next step is on-the-ground action and an ongoing commitment to risk mitigation at all levels of the community, from individuals to neighborhoods and HOAs, to Coos County, land managers, and other partners. This section of the CWPP includes recommendations and resources for mitigating wildfire risk and enhancing emergency preparedness. Coos County and public land managers have an important role to play in implementing the recommendations in this CWPP, and they have made commitments to take on-the-ground action as outlined in **Section 0.**

Individual homeowners, Tribes, neighborhoods, and HOAs also have a vital role to play in addressing shared wildfire risk. Action and community-building centered around mitigation have reduced wildfire risk and increased community resilience across Oregon. The cumulative impact of linked defensible space across private properties can improve the likelihood of home survival and protect firefighters during wildfire events (Jolley, 2018; Knapp et al., 2021). Oregon Wildfire Ready Response & Recovery , Wildfire Oregon, the Oregon Wildfire Programs, and the National Fire Protection Agency (NFPA) Firewise USA® are community-based programs that exemplify the FAC concept and recognize commitment to reducing wildfire risk. "Firewise USA® neighborhoods use free community wildfire risk assessments developed by fire professionals to create an action plan to reduce their shared risk. Firewise USA® sites may even be eligible for grant opportunities" (Oregon Department of Forestry, n.d.). To learn more about becoming a Firewise USA® site contact your Oregon Firewise liaison at firewise.org. Approved Firewise USA® Action Plans or other approved community wildfire mitigation or action plans, regardless of their status at the time of writing, are incorporated into this plan.

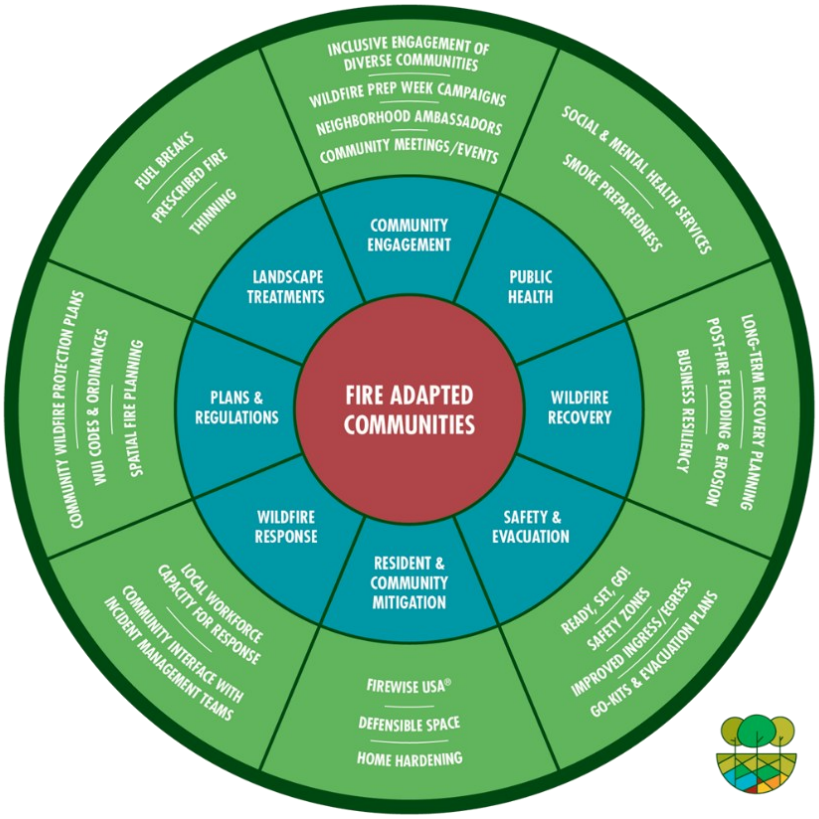


Figure 3.1 *The Fire Adapted Community's graphic provides specific programs and activities that communities can take to reduce their wildfire risk and increase their resilience. Source: Fire Adapted Community Learning Network.*

3.a. Recommendations for Coos County Residents

Mitigate the Home Ignition Zone

You can increase the likelihood that your home will stand strong during a wildfire and help protect the safety of firefighters by creating defensible space, replacing or altering building materials to make your home less susceptible to ignition, and increasing firefighter access along your driveway.

During catastrophic wildfires, property loss happens mostly due to conditions in the **home ignition zone** (HIZ). The home ignition zone includes your home and other structures (e.g., sheds and garages) and the area within 100 feet of each structure. Firefighter intervention, adequate defensible space, and home hardening measures are common factors for homes that stand strong during major wildfires (IIBHS, 2019; Knapp et al., 2021; Maranghides et al., 2022). According to the OSU Extension Office "Your house and outbuildings are potential fuel in a fire-prone environment. Defensible space gives firefighters an opportunity to safely defend your home and other structures from a wildfire while breaking up pathways for fire that can lead to home ignition. Firefighters can't always protect every individual home, so it's your responsibility to take action."

It is important for residents to work together as a community to mitigate shared wildfire risk in the HIZ. Structure-to-structure ignition is a major concern in high-density WUI neighborhoods and can cause substantial property loss. Neighbors can increase their homes' chances of survival during a wildfire if they work together to reduce hazards in their overlapping defensible space. If you are a home- or property-owner with long- or short-term renters, the responsibility to mitigate the HIZ is yours and recommendations in this section apply to you.

Defensible space is the area around a building where vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire and reduce exposure to radiant heat and direct flame. It is encouraged that residents develop defensible space so their homes can stand strong during a wildfire without relying upon limited firefighter resources.

Home hardening is the practice of making a home less likely to ignite from the heat or direct contact with flames or embers. It is important to remember that embers can ignite homes even when the flaming front of a wildfire is far away. Home hardening involves reducing this risk by changing building materials, installation techniques, and structural characteristics of a home. Home hardening measures are particularly important for WUI homes; **50 to 90% of homes ignite due to embers rather than radiant heat during wildfires** (Gropp, 2019; Holstrom et al., 2023; Johnston, 2018). Contact the Oregon State Fire Marshal or your local FPD for a home hazard assessment.

Fortunately, many residents in Coos County have already started taking actions to mitigate their home ignition zone (**Figure 3.a.1**). Over 81% of residents who responded to the CWPP survey have removed debris from around their gutters and homes, and about three fourths of residents manage noxious weeds and vegetation from around their homes. Less than a quarter have installed metal screens to block embers from entering vents on their home. Residents should follow the defensible space and home hardening recommendations outlined below to continue increasing their home's chances of standing strong during a wildfire.

Hundreds of volunteers with fire departments and protection districts across Coos County donate thousands of hours of their time in service to their community every year. As a resident, homeowner, landowner, or business owner in Coos County, spending even just 1 day each year preparing your family and your home for wildfire emergencies can honor the hard work of volunteers in the county and make the community safer for everyone.

"We don't want to make or force you to do anything on your property. We want you to see the value of doing this work yourself." ~ Chief Lanny Boston, Former Fire Chief of Bandon Rural Fire District

Question from Coos County Wildfire Preparedness Survey – April 2025

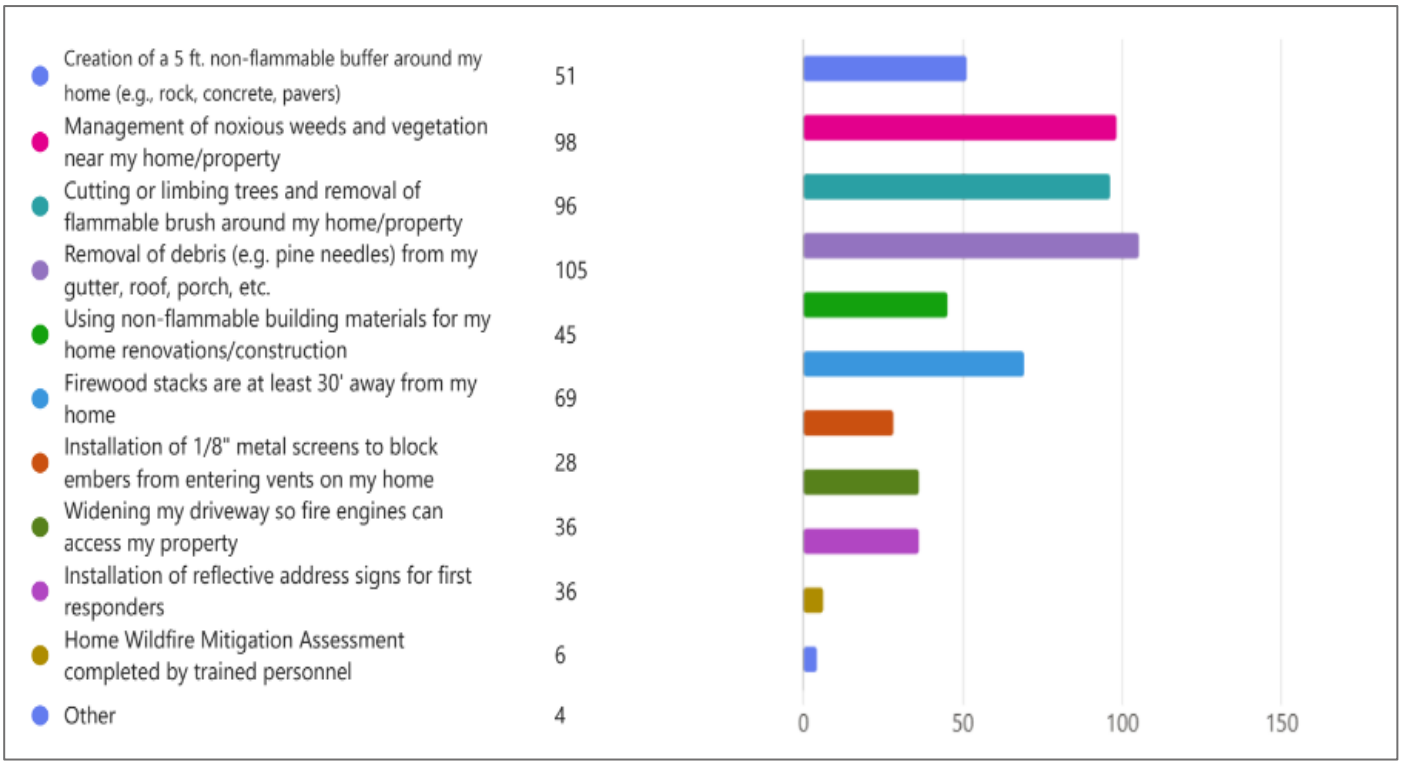


Figure 3.a.1. *Types of actions that Coos County residents have completed to mitigate risk in their home ignition zone. Over 78% of respondents have removed/managed debris, flammable brush, and noxious weed from around their homes/properties. See* ***Appendix C*** *for a full summary of survey findings.*

Wildfire Risk Reduction Requirements in Coos County

Coos County has a list of current adopted building codes for homes and manufactured dwellings. The Coos County Community Development Department provides the names and numbers of who to contact with questions regarding building in the WUI. New construction and replacement construction that require a building permit must comply with the current building standards.

Defensible Space

Defensible space creates a buffer between your home and grass, trees, and shrubs that could ignite during a wildland fire. Defensible space can slow the spread of wildfire, prevent direct flame contact, and reduce the chance that embers will ignite material on or near your home (Hakes et al., 2017). Substantially reducing vegetation within the HIZ and removing vegetation that overhangs decks and roofs can reduce structure loss, especially for homes on slopes (Syphard et al., 2014).

> **Do not count on firefighters staying to defend your home—your home should be able to stand strong on its own during a wildfire. There are never enough firefighters to stay and defend every single home during large incidents.** Properties that are not defensible will often not receive firefighter resources due to unsafe conditions and the higher likelihood of home loss regardless of firefighter intervention.

Defensible space is divided into three zones around a home or other structure, and recommended practices vary among zones. Oregon State Fire Marshal and NFPA Firewise USA® define the immediate zone as 0 to 5 feet from the home, the intermediate zone as 5 to 30 feet from the home, and the extended zone as 30 to 100 feet from the home (**Figure 3.a.2**). **It is important to acknowledge these distances are specific for flat ground. Steep slopes and uneven terrain can double the distance of each zone.**

Property owners should establish defensible space around each building on their property, including campers / RVs, detached garages, storage buildings, barns, and other structures. RVs are highly flammable and can emit embers that might ignite nearby homes and vegetation. Removing all vegetation under and around campers in the immediate zone is crucial. Campers/RVs, boats, detached garages, storage buildings, barns, and other large structures should be placed at least 50 feet away from primary structures to prevent structure-to-structure fire spread (Maranghides et al., 2022).

Some homes in Coos County have quality defensible space with mowed grass near structures, trees limbed and not overhanging roofs, and non-flammable barriers, such as gravel, within the immediate zone. Photo credit: The Ember Alliance.

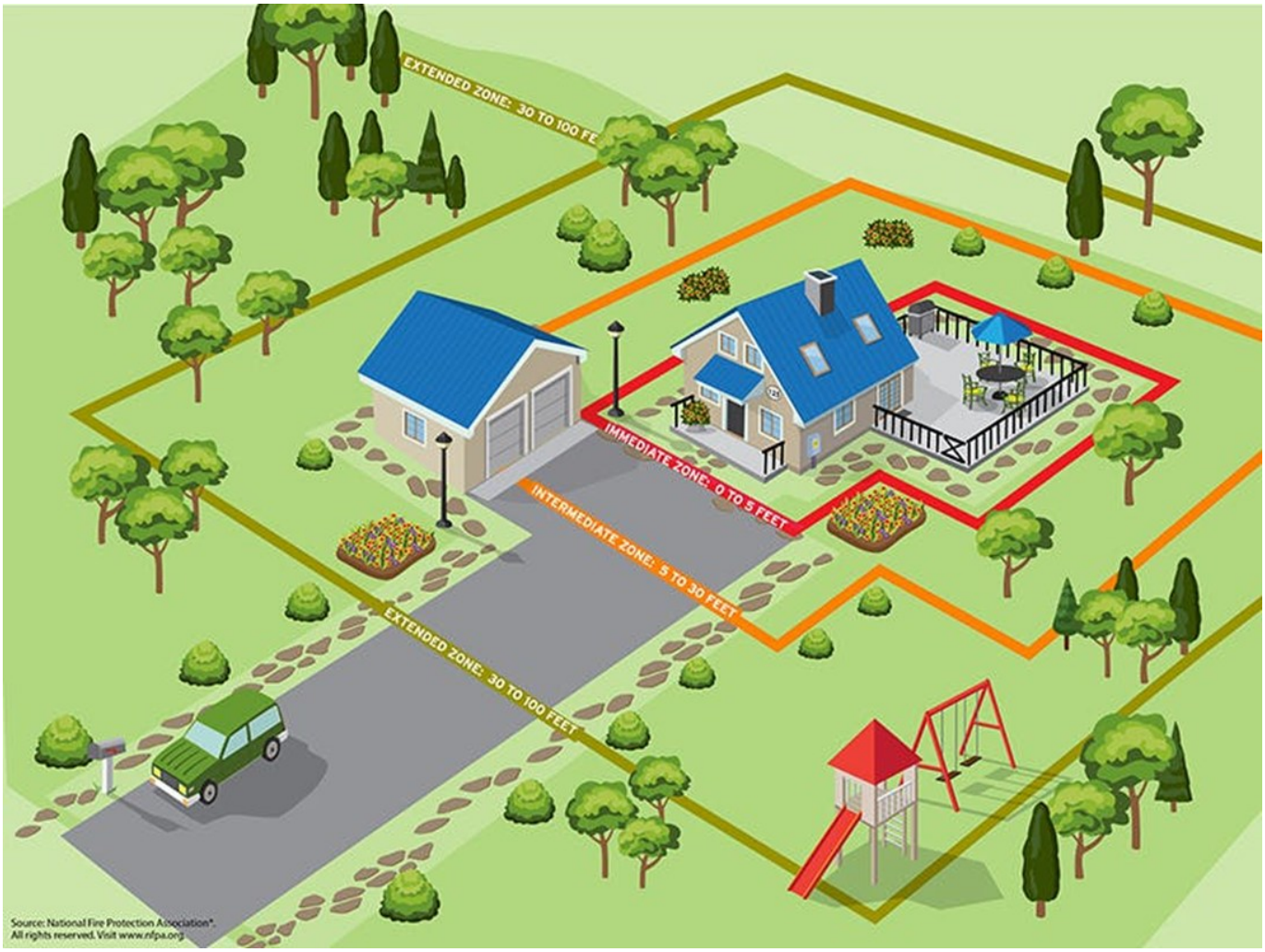


Figure 3.a.2. *Home ignition zone showing immediate, intermediate, and extended zone recommendations. Using ignition-resistant building materials and removing burnable fuel around primary structures, outbuildings, and campers/RVs is crucial for increasing your home's chance of standing strong during a wildfire and creating safe conditions for wildland firefighters. Source: National Fire Protection Association (NFPA).*

Table 3.a.1. *Home ignition zone recommendations based on the OSFM publications. Specific measures will depend on the placement and condition of your property.*

Immediate Zone: 0 to 5 feet from your home – the noncombustible zone.
Goal: Prevent flames from coming into direct contact with your home.
• Create a noncombustible border 5 feet around your home. Remove all vegetation and replace flammable wood chips or mulch with alternatives like dirt, stone, flagstone, concrete, or gravel. Research shows that the worst materials to use in the immediate zone are shredded rubber, pine needles, and shredded western red cedar due to their high flammability **(Quarles and Smith, 2011)**. • Relocate firewood, propane tanks, and other combustible materials to the extended zone. • Remove branches that hang over your roof and drop needles onto your roof and remove all fuels within 10 feet of the chimney. • Remove combustible materials (dry vegetation, wooden picnic tables, juniper shrubs, etc.) from underneath, on top of, or within 5 feet of decks, overhangs, windows, and doors. • Annually remove dead or dry leaves, pine needles, and dead plants within 5 feet of your home and off your deck, roof, and gutters. Raking material farther than 5 feet from structures will not significantly reduce the likelihood of ignition. • Move firewood or other combustible materials to the Immediate and Extended Zone. • Do not use space under decks for storage.

Intermediate Zone: 5 to 30 feet from your home – the lean, clean, and green zone.
Goal: Slow the movement of flames approaching your home and lower the fire intensity.
• Relocate wood piles and propane tanks to the extended zone. • Irrigate and mow grasses to 4 inches tall or less. If you are unable to irrigate, replace dry grasses with Fire-resistant Plants for Home Landscapes in the Pacific Northwest that are more drought tolerant and less flammable. • Remove any accumulated surface fuels such as logs, branches, slash, and mulch. • Remove highly combustible vegetation (such as gorse, Himalayan blackberries, junipers, pampas grass, jubata grass, and ryegrass) because they are highly flammable and tend to hold a layer of flammable material beneath them. Landscape with Fire-resistant Plants for Home Landscapes. • Remove enough trees to create at least 10 feet* of space between crowns. Measure from the outermost branch of one tree to the nearest branch on the next tree. Create even more space between trees if your home is on a slope. See **Figure** 3.a.3 for how to measure crown spacing. • Favor the retention of deciduous trees like red alder, bigleaf maple, or aspen trees. Some deciduous species have high fuel moisture, no low branches, and smooth bark, making them less likely to ignite than conifer trees. An exception is myrtle, which has volatile compounds in its leaves that make it more flammable. • Remove ladder fuels under remaining trees. This is any vegetation that can bring fire from the ground up into taller fuels. • Remove limbs so branches do not hang below 10 feet above the ground (at least 6 feet if 10 feet is not feasible). See **Figure 3.a.3** for a depiction of how to measure limb height. • Keep spacing between shrubs at least 2-3 times their height. • Remove stressed, diseased, dead, or dying trees and shrubs. This reduces the amount of vegetation available to burn and improves forest health. • Keep shrubs at least 10 feet* away from the edge of tree branches.

Extended Zone: 30 to 100 feet from your home
If you live on a slope, this zone should be larger due to the greater potential for extreme fire behavior.

Goal: Slow movement of flames, move fire to the ground, and reduce ember production.

- For large properties with many trees, consult with a qualified forester to develop a plan to manage your property to achieve fuel reduction and other goals, such as creating wildlife habitat.
- Store firewood and propane tanks at least 30 feet away and uphill from your home and away from flammable vegetation. Store even farther away if your home is on a slope.
- Move campers/RVs, boats, detached garages, storage buildings, barns, and other large structures at least 50 feet away from your home.
- Mow or trim grasses to a maximum height of 6 inches. Grasses can be taller in the extended zone than the intermediate zone because of the greater distance from your home, but shorter grass is always better for reducing potential flame lengths and therefore radiant heat exposure.
- Remove enough trees to create at least 6- to 10-foot spacing* between the outermost branches of remaining trees. Create even more space between trees if your home is on a slope. See **Figure 3.a.3** for a depiction of how to measure crown spacing.
- Favor the retention of deciduous trees like red alder, bigleaf maple, or aspen. Some deciduous species have high fuel moisture, no low branches, and smooth bark, making them less likely to ignite than conifer trees.
- Remove limbs so branches do not hang below 6 feet above the ground, ideally not below 10 feet above the ground. See **Figure 3.a.3** for a depiction of how to measure limb height.
- Remove shrubs and saplings that can serve as ladder fuels.
- Remove heavy accumulations of dead trees, branches, and piles of fallen leaves, needles, twigs, pinecones, and small branches. Thin trees to increase spacing and remove ladder fuels to reduce the likelihood of torching, crown fires, and ember production.

**Spacing recommendations are a general guideline and should be increased for properties on steeper slopes. Reach out to your local fire protection district, the Oregon Fire Marshal, Coos Forest Protective Association, or other forestry professionals to develop a plan for mitigating wildfire risk on your property.*

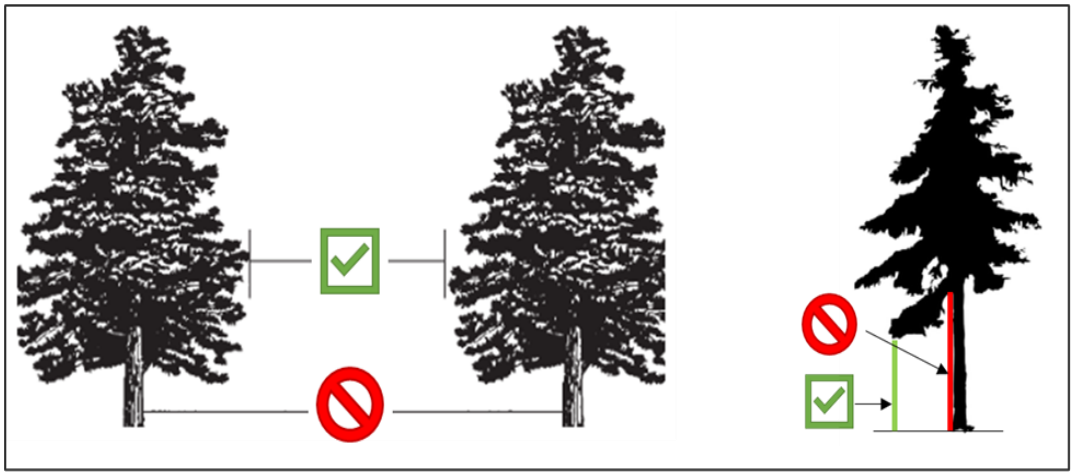


Figure 3.a.3. *Spacing between tree crowns is measured from the edge of tree crown to tree crown, NOT from tree stem to tree stem (left). Height of limbs above the ground is measured from the ground to the lowest point of the limb, NOT from where the limb attaches to the tree (right). Source: The Ember Alliance.*

Removing Woody Debris

When individuals create defensible space and clear trees or woody plants, slash (also known as woody debris—branches, treetops, and other remnants) can be generated. If unmanaged, this material becomes highly flammable fuel that can intensify wildfires. It is critical to remove slash from around your property, especially in the immediate and intermediate zones. Options for removing woody debris include pile burning and hauling material offsite. It is not recommended to chip slash and leave it in the immediate and intermediate zones because it can smolder during a wildfire and potentially ignite nearby vegetation and structures.

CFPA has regulations on when, what, and how citizens can burn debris (https://www.coosfpa.net/outdoor-burning-1). Burn barrels are no longer allowed during fire season because these used to cause unintentional ignitions. See tips on the next page from the ODF about outdoor debris burning. The guide is also available online at https://www.oregon.gov/odf/documents/fire/outdoor-debris-burning-safety-tips.pdf. See more information on pile burning in the section **Approaches to Slash Management**.

In Coos County, residents can haul woody material to the Beaver Hill Transfer Site where the material is burned. Woody material CANNOT include tree stumps, root wads, or branches/trees larger than 6 inches in diameter.

The City of Bandon conducts slash pickups three times per year, usually in the spring, summer, and fall. Events are typically organized and managed by Les's Sanitary | Garbage Services. Strict guidelines for pile size and placement exist. If residents miss the scheduled pick up or if your pile exceeds the limit, Les's Sanitary offers haul-away services for a fee as of November 2025. Myrtle Point Public Works does slash pickup in the city and burns it at the fairgrounds. Residents are encouraged to contact City of Myrtle Point - Public Works for current schedules and guidelines.

Important notes on removing woody debris:

Burn barrels are no longer allowed during fire season in Coos County because these have caused unintentional ignitions in the past. CFPA does not issue burn permits during fire season.

It is illegal to transport gorse and other class A and B noxious weeds in the State of Oregon.

Under proper weather conditions and with proper precautions, pile burns can be safely conducted in the WUI, for example, this pile burn in April 2025 north of Bunker Hill in Coos County. Photo credit: The Ember Alliance.

Gorse should **never** be transported offsite because seeds are viable for at least 30 years and transportation allows for easier spread of this noxious weed throughout the county. In fact, transporting gorse and other class A and B noxious weeds is illegal in the state of Oregon (Oregon Department of Agriculture, Chapter 603-052-1200). Instead, cut gorse can be burned on site to destroy seeds and prevent future germination. Larger pieces of wood leftover from thinning operations can be used as firewood. **However, firewood must be stored at least 30 feet and uphill structures; otherwise, it can create hazardous conditions near structures during a wildfire.**

CORRECT HOME DEBRIS BURNING

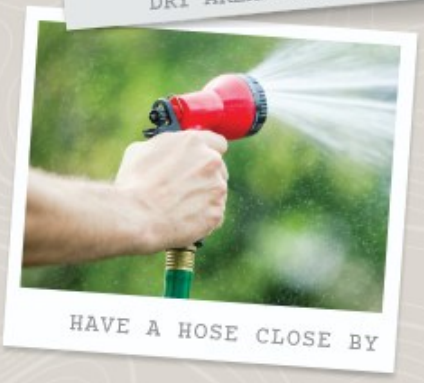
Outdoor Debris Burning

Burning of backyard piles are the leading culprit of human-caused wildfires. The primary reason for this is a lack of understanding of the conditions when burning takes place. The Oregon Department of Forestry and its rural fire protection district partners remove much of the guess work by either prohibiting this activity or only allowing it by permit during fire season. However, over 70% of escaped debris burn fires occur during fire season when it is illegal to burn. Violators are cited and held liable for fire suppression costs that could amount to tens of thousands of dollars, or more. Please act responsibly and do your part to prevent wildfires.

BURNING SAFETY TIPS

- **DO NOT BURN WHEN FIRE SEASON IS IN EFFECT.**
- Contact your local ODF or rural fire protection district before burning.
- Check the conditions, not the calendar. Fires can spread anytime of year given the right conditions (wind, humidity, temperature, fuels).
- Plan to burn in the late fall and winter when fire risk is at its lowest. Cover piles with polyethylene to maintain dry areas for burning during wet conditions later in the year.
- Clear a 10 foot area around the debris pile to prevent it from escaping.
- Have a steady water supply and a shovel on site to manage the burn and keep it contained.
- Burn yard debris only. Keep debris piles small, feeding from larger piles when burning.
- Stay with the fire until it is **DEAD OUT.**

COVER PILES TO MAINTAIN DRY AREAS FOR BURNING



HAVE A HOSE CLOSE BY

Low Flammability Landscaping

It is also important to think about the flammability of plants used for landscaping around your homes. See Fire-Resistant Plants for Home Landscape for information about low-flammability plants for use in the Pacific Northwest. Many low-flammability plants are beneficial for pollinators and require less watering. Tall grasses that dry out, such as pampas grass, jubata grass, and ryegrass, and highly flammable shrubs like gorse, Himalayan blackberries, and juniper are also fire hazards that should not be used as landscaping around your home. The Coos County Noxious Weed Control District Advisory Board also recommends that homeowners avoid invasive species in their landscaping, such as the plants mentioned above and others like butterfly bush.

Fire-resistant landscaping for the Pacific Northwest in the Immediate Zone can be aesthetically pleasing and more drought tolerant, requiring less watering during the summer. Limbed and thinned trees in the Intermediate Zone (as seen in the background of this photo) can create beautiful, open conditions that allow understory vegetation to flourish under higher light conditions and provide habitat for wildlife. Photo credit: Washington State University Master Gardener Program.

Mitigating Invasive Weeds

Invasive plants like gorse, scotch broom, and Armenian blackberries should be completely removed from the immediate and intermediate, and ideally even removed from the extended zone around your home because weeds spread. It is critical to address small patches of weeds before they spread and when the problem is manageable. Treating invasive species on your property can protect your neighbor's property by preventing it from spreading to theirs.

Removal of many invasive species requires integrated management with mowing, herbicide, mulching, crushing, and revegetation. Contact the Coos County Noxious Weed Control District Advisory Board to learn about their cost-share program to support landowners in the removal of invasive species from their properties. The Gorse Action Group provides great resources on best practices for treating gorse.

"It's not you, it's the gorse. It's hard & complicated & overwhelming, but you CAN get rid of gorse."

~ Gorse Action Group

Linked Defensible Space

The home ignition zone of individual homes can overlap that of their neighbors, so wildfire hazards on one property can threaten adjacent properties. Structures that are on fire can emit significant radiant heat and embers and endanger homes and structures near them**.** Nearly all structures in Coos County (95%) share an extended home ignition zone with at least one neighboring structure, and 37% share an HIZ with at least 11 other structures (**Figure 3.a.4**).

Neighbors can increase their homes' chances of survival during a wildfire if they work together to create linked defensible space. Linked defensible space also creates safer conditions and better tactical opportunities for wildland firefighters. Defensible space projects that span ownership boundaries are better candidates for grant funding due to their strategic value.

How can you help inspire your neighbors to act? Start by creating defensible space and hardening your own home. Then try the ideas below:

- ✓ Invite your neighbors over for a friendly conversation about the risk assessment in this CWPP. Review resources about defensible space together, discuss each other's concerns and values, and develop joint solutions to address shared risk.
- ✓ Volunteer with CFPA or your local Fire Department in Coos County to help educate your community about the benefits of defensible space and home hardening.
- ✓ Help organize walking tours in your neighborhood to visit the property of residents with exemplary defensible space. Witnessing the type of work that can be done, and seeing that a mitigated property can still be aesthetically pleasing, can encourage others to follow suit.
- ✓ Apply for grants that support fuels mitigation for multi-homeowner projects (see **Section 3.g. Funding Opportunities**).

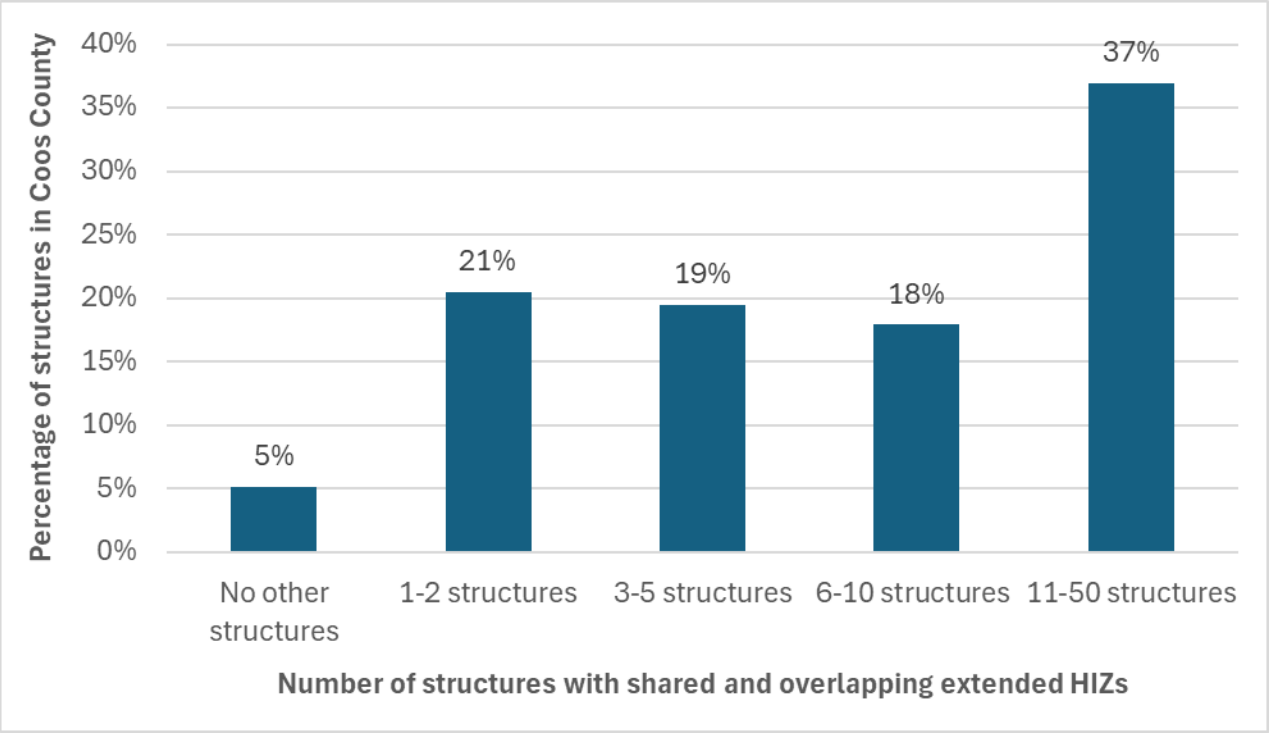


Figure 3.a.4. *Almost all (95%) of structures within Coos County have overlapping extended home ignition zones (HIZs; up to 100 feet from structures) with at least one other structure, opening them up to higher risk of short-range embers from other structures and requiring greater coordination among neighbors to mitigate shared risk.*

Mosaic Landscapes

Varied fuel types are known to slow the spread of fire, and heterogeneous landscapes (landscapes with multiple fuel types and trees of different sizes and ages) are more typical of historical forest conditions (Duncan et al., 2015). Creating a mosaic landscape in neighborhoods can help slow fire spread by changing the fuel types as it moves across a hill or valley (**Figure 3.a.5**). A mosaic landscape can be created in many ways. For example, a neighborhood could have a few acres of old-growth conifer trees next to a couple acres of forests dominated by deciduous trees (e.g., red alder, bigleaf maple, and aspen), and a few acres of young conifer trees by a large grassy meadow. This can be arranged in many ways for aesthetic and tactical purposes and will resemble a patchwork quilt or mosaic art.

The homes in these patches still need to have adequate defensible space, but this would create a more diverse landscape where fire may move slower as it transitions between forest types and unforested locations like shrublands or meadows. Slower fire movement means firefighters have time to defend more homes in the neighborhood. It also creates a diversity of biomes that both residents and wildlife enjoy.

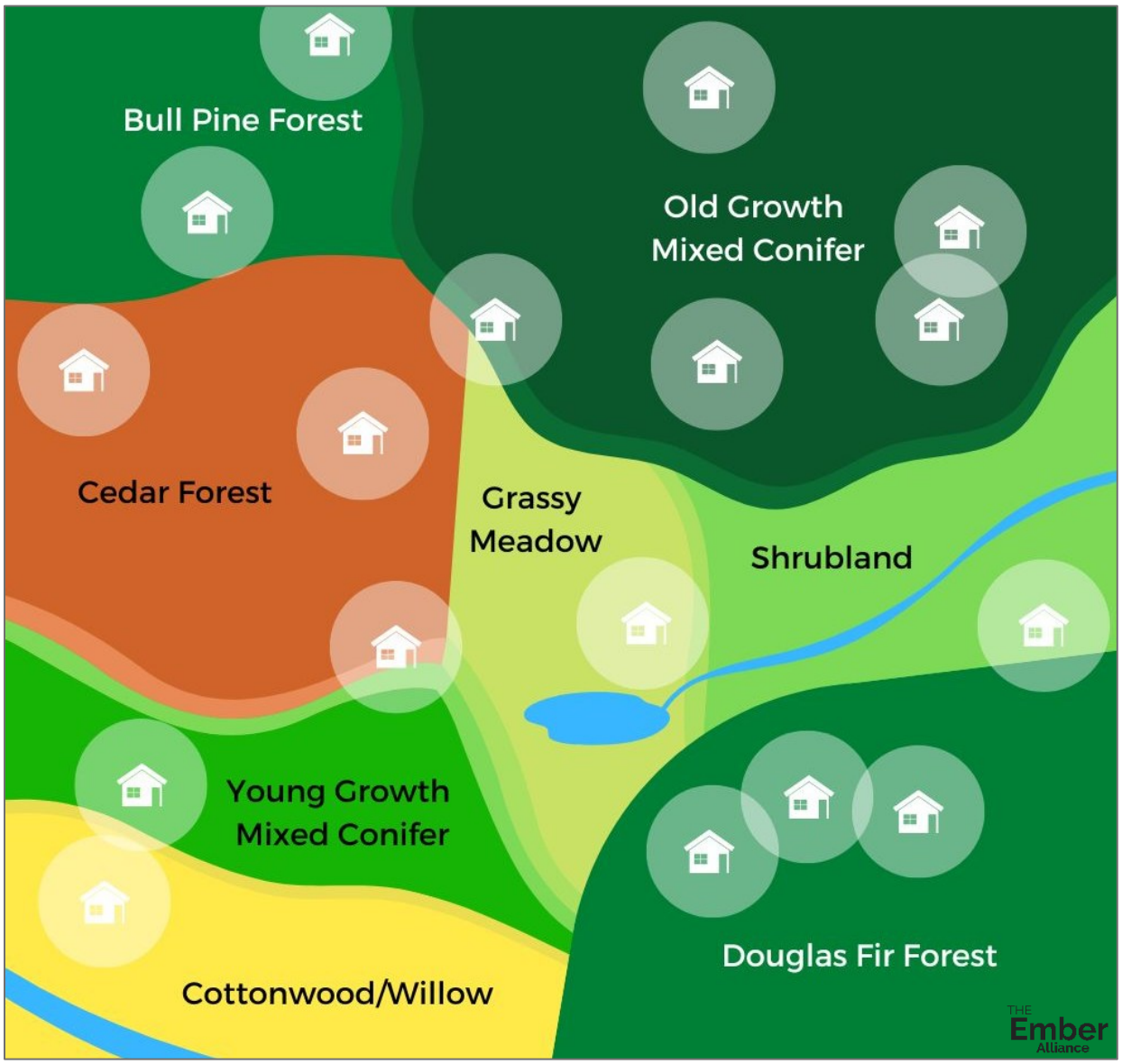
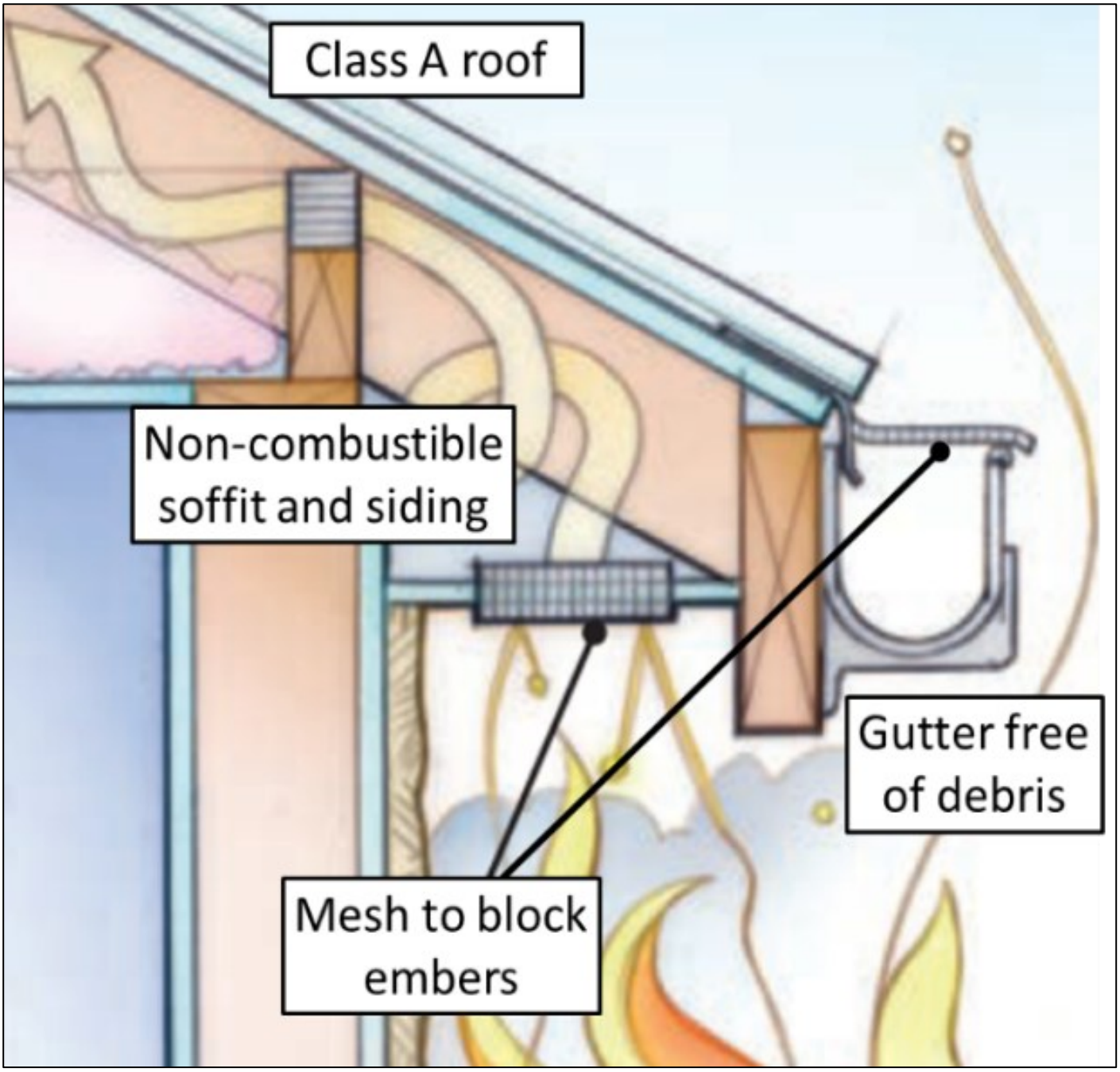


Figure 3.a.5 *Example of a mosaic landscape in a neighborhood. Each home has defensible space around it, and the landscape is varied throughout, providing tactical opportunities for firefighters working to defend homes. Source: The Ember Alliance.*

Home Hardening

Buildings cannot be made fireproof, but the chance of your home standing strong during wildfires increases when you reduce the ignitability of your home through home hardening and the creation and maintenance of defensible space. Research from the Insurance Institute for Business & Home Safety (IBHS) clearly illustrates the benefits of home hardening for reducing the chance of home ignition from embers (use their interactive home to see their research here). During many wildland fires, 50 to 90% of homes ignite due to embers rather than radiant heat or direct flame (Babrauskas, 2018; Gropp, 2019). Home hardening is the only defense against embers.



Residents can increase their homes' chance of survival by making it harder for embers to enter and ignite their homes (image from Healthy Building Science).

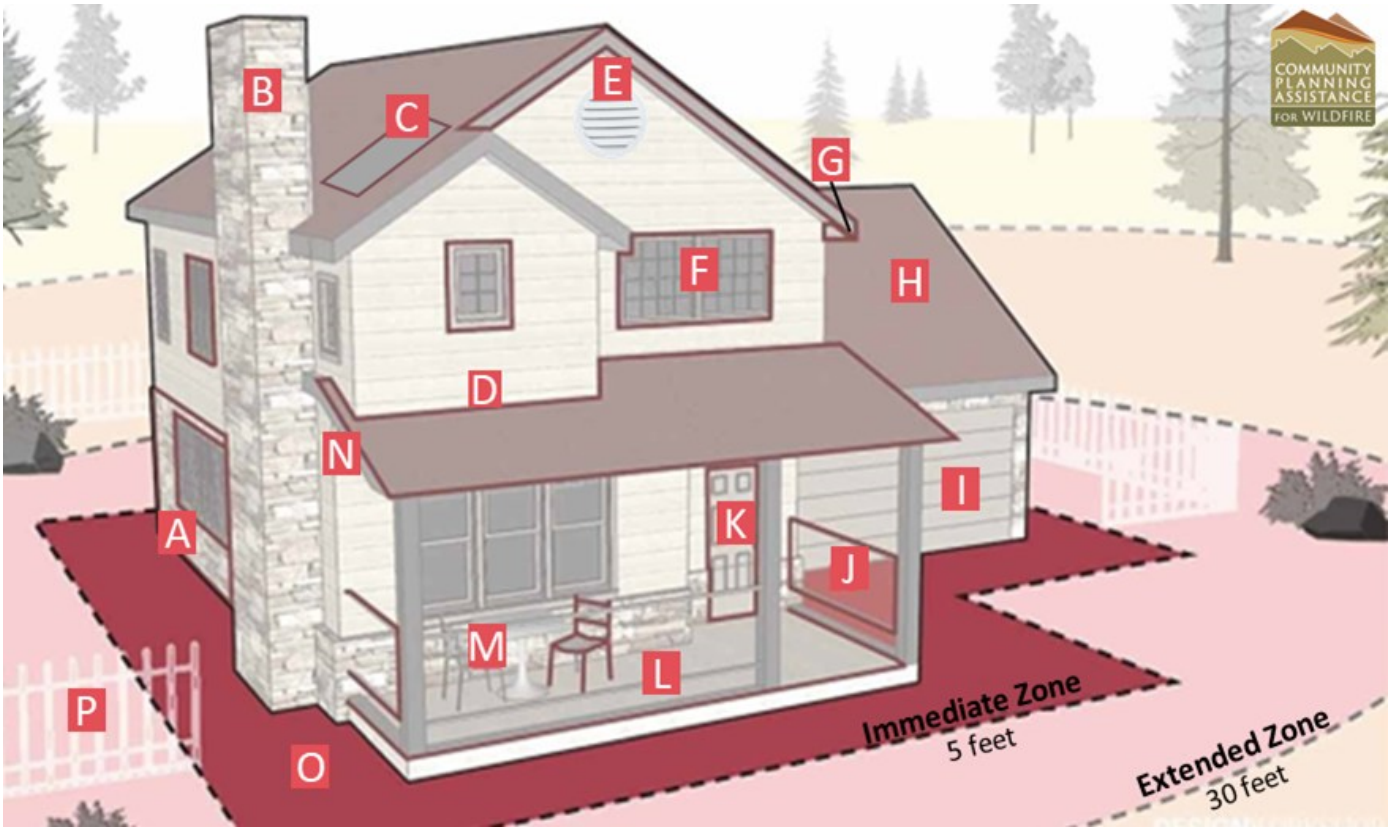
Over 60% of homes in Coos County could be at risk of long-range embers, and about 20% are at risk of abundant short-range embers and/or radiant heat from burning vegetation under severe fire weather conditions (**Figure 2.f.8**). Home ignition risk is likely higher than that estimated by this analysis; parts of Coos County with a high density of structures, such as Coos Bay and Bandon have increased risk for home-to-home ignition from radiant heat and embers. Reducing the ability of embers to penetrate and ignite your home is recommended for everyone in Coos County.

Roofs, siding, decks, windows, vents, gutters are particularly vulnerable to embers from wildfire, and actions that prevent embers from penetrating your home can offer additional benefits such as reduced maintenance costs, greater durability, and increased energy efficiency:

- **Roofs** should be made of noncombustible materials[1] such as composite, metal, or tile, which tend to be more durable against wind, snow, and hail as well as wildfire.
- **Siding and decking** should be made of ignition-resistant or noncombustible materials, which is particularly effective when homes also have a 5-foot noncombustible border of dirt, stone, or gravel around them. Non-wood siding, such as cement board and stucco, and decking are often more durable and require less routine maintenance than traditional wood.
- **Gutters** should be made of noncombustible materials such as metal or tile, and need to be cleared of debris.
- **Multi-pane windows** have greater resistance to radiant heat and provide better insulation and energy efficiency for your home. Windows often fail before a home ignites, providing a direct path for flames and airborne embers to enter a home. Tempered glass is three to four times more resistant to heat exposures than typical annealed glass and is therefore a better choice when selecting windows (Oregon Building Codes Division, n.d.).
- **Enclosed eaves and vent screens** reduce the penetration of wind-borne embers into structures, and can deter pests and critters from nesting in your home's vents and eaves (Hakes et al., 2017; Syphard and Keeley, 2019).
- **Fences** should be made of noncombustible materials and kept at least 8 feet away from the home (at least 20 feet away for double combustible fences). Fences can serve as pathways for wildfire to travel between vegetation and structures and from structure to structure (Maranghides et al., 2022). Wooden fences attached to homes served as one of the leading causes of home loss during recent fires such as the 2021 Marshall Fire in Colorado (Holstrom et al., 2023). Ignition-resistant and noncombustible fences are more durable and require less maintenance than wood fences.

There are many low-cost actions you can start with to harden your home (**Figure 3.a.6**). Keep home-hardening practices in mind and use ignition-resistant materials if you replace a hail-damaged roof or remodel your home. New construction and replacement construction that require a building permit must comply with the current adopted building codes of Coos County.

[1] See the Glossary for the definition of terms used the describe the performance of building materials when exposed to fire (e.g., wildfire-resistant, ignition-resistant, and noncombustible).



Low-cost actions:

B. Cover chimneys and stovepipe outlets with 3/8th to ½ inch corrosion-resistant metal mesh.

C. Minimize debris accumulation under and next to solar panels.

E. Cover vent openings with 1/16th to 1/8th inch corrosion-resistant metal mesh. Install dryer vents with metal flappers and keep closed unless in use.

G. Clear debris from roof and gutters regularly.

I. Install metal flashing around and under garage doors that goes up at least 6 inches inside and outside the door.

J. Use noncombustible lattice, trellis, or other decorative features.

K. Install weather stripping around and under doors.

L. Remove combustible materials from underneath, on top of, or within 5 feet of deck.

M. Use noncombustible patio furniture.

N. Cover all eaves with screened vents.

O. Establish and maintain a 5-foot noncombustible buffer around the home.

Actions to plan and save for:

A. Use noncombustible or ignition-resistant siding and trim (e.g., stucco, fiber cement, fire-retardant treated wood) at least 2 feet up around the base of your home.

C. Use multipaned glass for skylights, not materials that can melt (e.g., plexiglass), and use metal flashing.

D. Install a 6-inch vertical noncombustible surface on all gables above roofs.

F. Install multi-pane windows with at least one tempered-glass pane and metal mesh screens. Use noncombustible materials for window frames.

G. Install noncombustible gutters, gutter covers, and downspouts.

H. Install ignition-resistant or noncombustible roofs (composite, metal, or tile).

I. Install 1-hour fire rated garage doors.

K. Install 1-hour fire rated front and back doors.

L. Use ignition-resistant or noncombustible decking. Enclose crawl spaces.

N. Use noncombustible eaves.

P. Replace wooden fences with noncombustible materials and keep at least 8 feet away from the home (at least 20 feet away for double combustible fences).

Figure 3.a.6. *A home can never be made fireproof, but home hardening practices decrease the chance that flames, radiant heat, and embers will ignite your home. Infographic by Community Planning Assistance for Wildfire with modifications from The Ember Alliance to include information from CALFIRE 2019 and Maranghides et al. 2022.*

Recommendations for Residents in Manufactured Homes

According to Fire Safe Marin, "embers are the most common cause of ignition for both site built and manufactured homes". Manufactured homes and neighborhoods may have important structural or organizational considerations that affect wildfire and evacuation safety and preparedness (**Figure 3.a.7**). According to an analysis of home loss from the 2018 Camp Fire in California, researchers found that manufactured homes were far more likely to be destroyed (Troy et al., 2022). Specific steps for hardening manufactured homes and the areas around them can be found in **Figure 3.a.8** and **Figure 3.a.9**.

Recommendations for Manufactured Home Neighborhoods:(Julia B. Goolsby et al., 2024)

- Develop wildfire risk information sharing campaigns through the partnership of fire and rescue professionals and local community groups.
- Consider communicating about wildfire risk via preferred channels: videos, reports, e-newsletter and/or mailed newsletter.
- Wildfire risk information may be more effective if communicated in both Spanish and English.
- Consider financial barriers when designing programs to encourage risk mitigation.
- When promoting wildfire risk mitigation, focus on characteristics residents can change, such as:
    - Removing combustible items near the home.
    - Ensuring skirting around the bottom of manufactured homes is properly fitted to prevent embers and flames from entering below the home.
    - Maintaining or replacing wooden decks with less flammable material.
- In wildfire outreach, focus on evacuation preparedness, including evacuation planning, signing up for evacuation notifications, identifying safe evacuation routes and destinations, and packing a "go bag."
- Hold neighborhood-wide practice evacuations.
- Avoid siting new developments in areas of high risk when possible and consider installing homes on a permanent concrete foundation.
- Consider evacuation and emergency response in the design of driveways, roads and other infrastructure. Ensure roads are wide enough for emergency vehicles and evacuees, require a secondary access, ensure adequate water supply for fire response, and use consistent, noncombustible, reflective address and street signs. See more information in recommendations from Oregon's Defensible Space Code Language Draft_2024.pdf.
- Provide information about wildfire risk, where to find real-time warning information, safety zones, and evacuation routes.
- Include fire departments, emergency managers, public works staff, and public health officials in planning and development review processes. Ensure mobile home residents are included in community-wide projects to decrease wildfire risk.

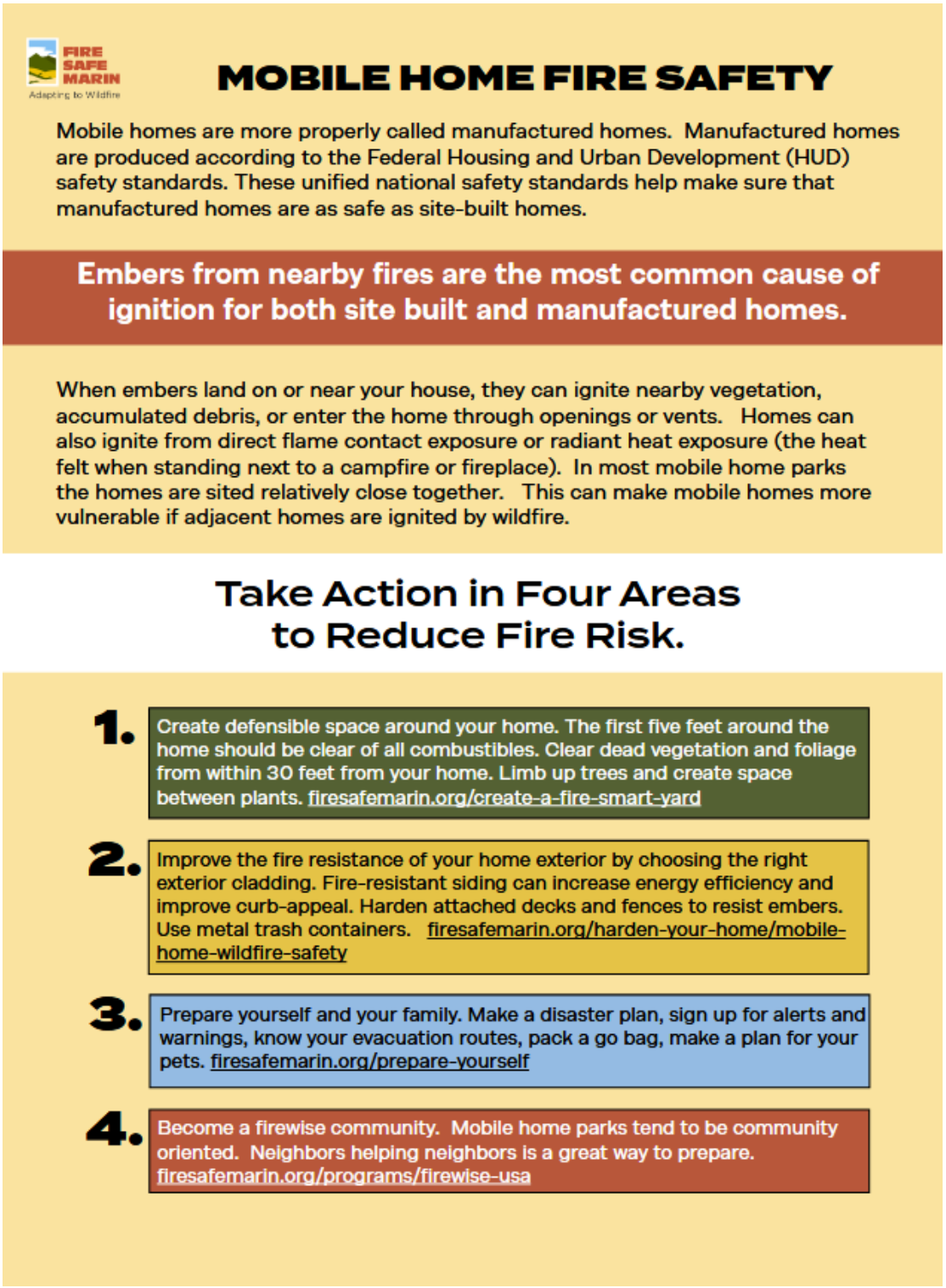


Figure 3.a.7*. Fire Safe Marin provides recommendations for manufactured homeowners. Source: Fire Safe Marin.*

Figure 3.a.8*. Community Planning and Assistance for Wildfire (CPAW) identifies strategies tailored to manufactured home wildfire resilience. Source: [Headwaters Economics / Community Planning Assistance for Wildfire](#).*

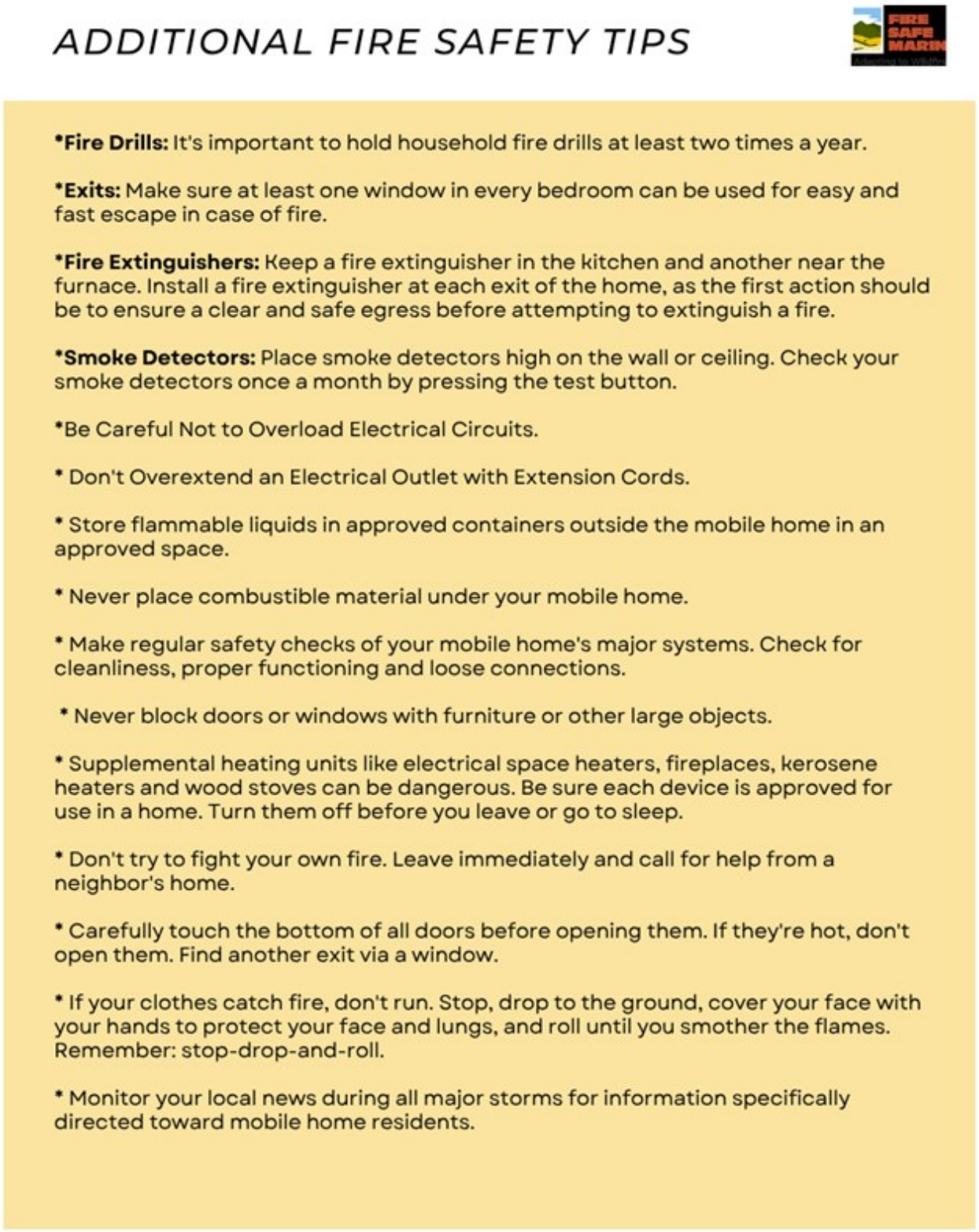


Figure 3.a.9*. Additional fire safety tips for manufactured homeowners and the areas surrounding them. A statistical analysis by the National Fire Prevention Association (NFPA) suggests modern manufactured housing is nearly three times safer than pre-HUD Code mobile homes. Source: Fire Safe Marin.*

Annual Safety Measures and Home Maintenance

Reviewing safety protocols, creating defensible space, and hardening your home are not one-time actions, but part of *annual* home maintenance when living in the WUI. Rapid regrowth of vegetation in Coos County necessitates regular mitigation to keep fire risk low on your property. Invasive species like gorse require multiple, repeated treatments to get rid of. The OSU Extension Service also provides help and resources for how to prioritize actions and a list of actions for home hardening in this video.

Figure 3.a.10 *Infographic by The Oregon State Fire Marshal's Office, who reminds all residents about ways they can harden their homes.*

Private Water Resources

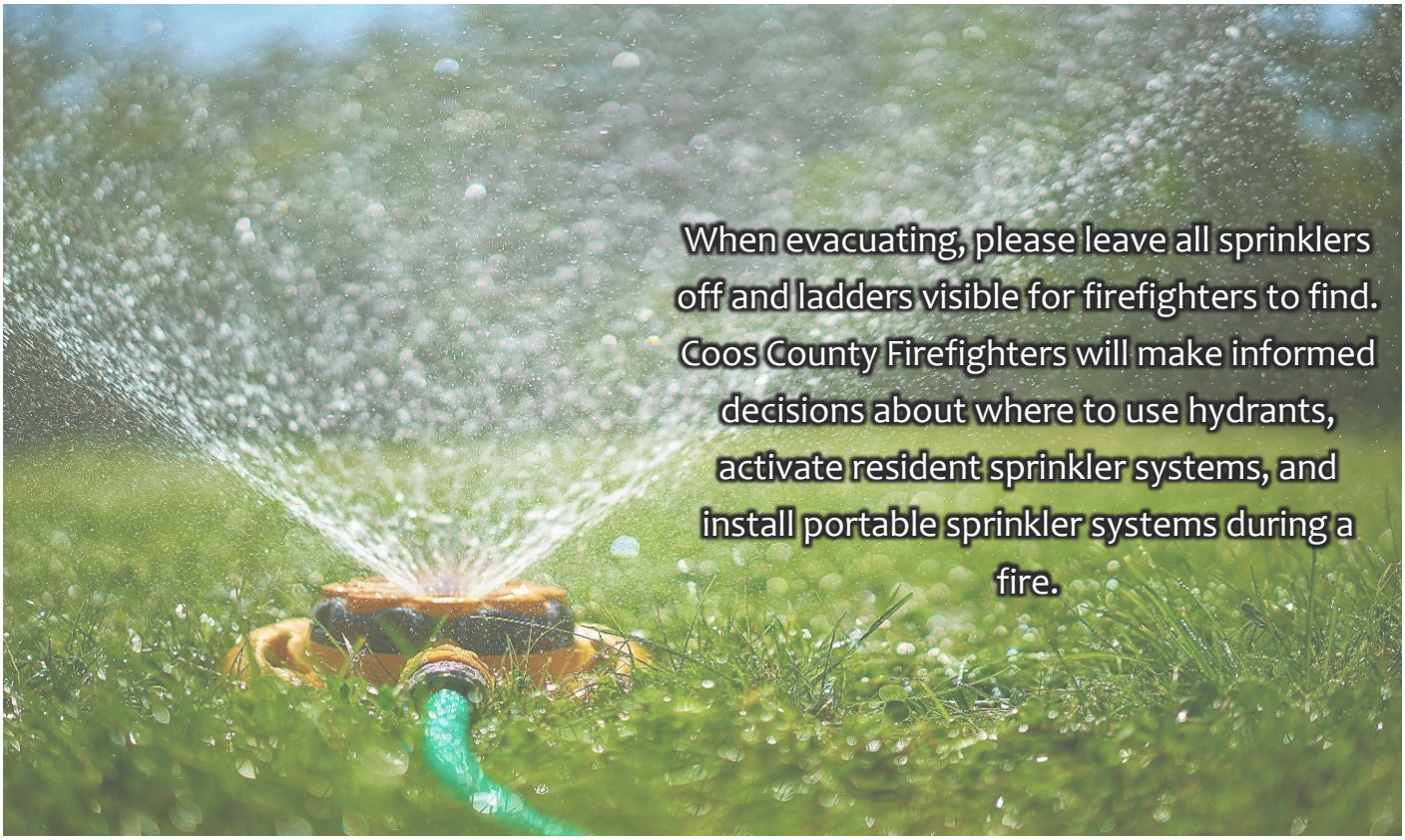
Water resources to fight fires in the foothills can be scarce, especially during the fire season in late summer and fall. Firefighters are skilled at determining the most beneficial ways to use water to protect structures from an approaching fire. Providing clear access to suitable water resources around your home or neighborhood can help them defend your home. In 2023, 2,518 home fires in Oregon caused $119.5 million in losses (Oregon State Fire Marshal, n.d.).

Do not turn sprinklers on around your home as you evacuate. This is counterproductive to protecting your home because continuous use of water far in advance of the fire can drain local wells and cisterns long before the fire reaches your neighborhood. This leaves firefighters with less resources to defend your home, putting their

lives and your property at higher risk. Leave sprinklers visible but **turned off** so firefighters can determine whether they will be useful or not. Read this post by Fire Safe Marin about why it is unwise to leave water running when you evacuate during a wildfire.

Before you evacuate, prepare personal water resources by making them, and any available ladders, easily accessible and clearly labelling how to use them. Unlock pump house doors and remove vegetation or other obstructions. If you have a generator, leave it in an accessible location in case the power is turned off. Notify the fire department of community cisterns or tanks so they can be identified prior to an emergency. Contact CFPA when planning a new cistern to ensure it is compatible with local fire equipment.

Most importantly, create defensible space around your home and buildings so that water resources can be used effectively. Water available and water pressure are not guaranteed during large and complex wildfire incidents due to high demand for water and some outdated water systems in the county. Maintaining a property that requires less water and resources to defend is more likely to stand strong and be more resilient to wildfire.



Mitigation Barriers and Opportunities

Homeowners and residents in the WUI share concerns about mitigating risk and maintaining safer conditions in their home ignition zone. Top challenges in Coos County include the financial cost of mitigation, lack of time and/or physical inability to complete the work, lack of knowledge, and being unsure of who to contact for help with mitigation projects (**Figure 3.a.11**).

Question from Coos County Wildfire Preparedness Survey – April 2025

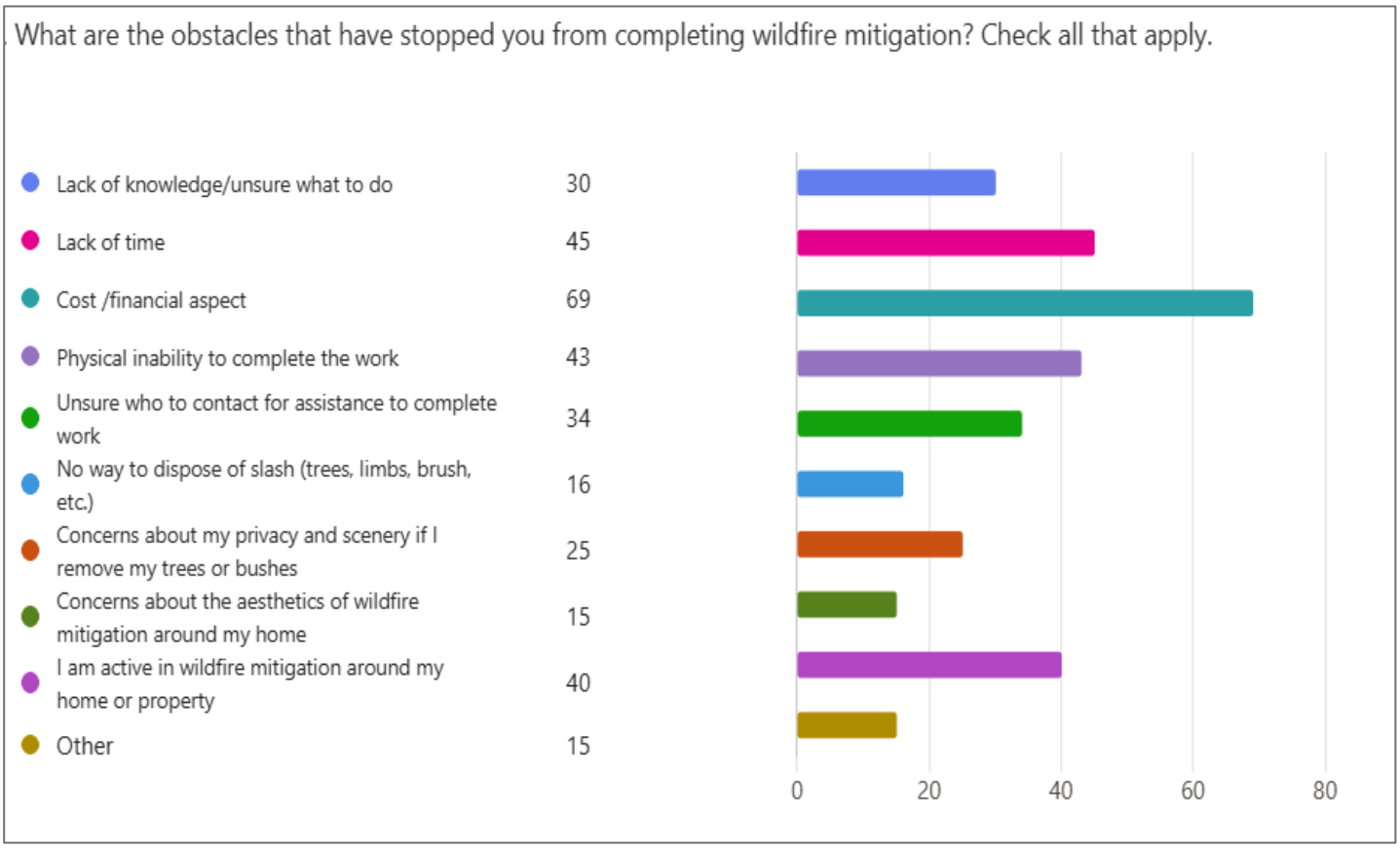


Figure 3.a.11. *Percentage of Coos County residents who responded to the CWPP survey and their barriers to completing further mitigation on their home/land. See* ***Appendix C. Community Survey Methodology & Results*** *for a full summary of survey findings.*

Concern: I don't know where to start with creating defensible space.

- ✓ Review **Table 3.a.1** and the OSU Extension publication Extending your protection: Best practices for wildfire fuels maintenance in northwest Oregon for mitigation recommendations.
- ✓ Reach out to the Oregon State Fire Marshal's office to learn about defensible space and home hardening tactics from their qualified specialists.

Concern: I don't have the money, time, or professional knowledge to invest in defensible space.

Creating adequate defensible space can take years and a significant financial investment. Fortunately, there are professionals around Coos County and multiple effective, low-cost measures that residents can start with:

- ✓ Annually remove leaves, needles, and other vegetation from roofs, gutters, decks, and around the base of homes.
- ✓ Use hand tools like a pole saw to remove tree branches that hang less than 10 feet above the ground.
- ✓ Remove combustible materials (dry vegetation, wooden picnic tables, stacked cut wood, juniper shrubs, etc.) from underneath, on top of, or within 5 feet of decks.
- ✓ Remove vegetation and combustible materials within 5 feet of windows and doors.
- ✓ Replace wood mulch within 5 feet of all structures with dirt, stone, or gravel.
- ✓ Remove downed logs and branches within 30 feet of all structures.
- ✓ Apply for cost-sharing grants with your neighbors to subsidize the creation of defensible space (see Section 3.e. Funding Opportunities and visit Oregon Department of Forestry : Fire prevention : Fire : State of Oregon for potential funding sources).
- ✓ Use Home Page | Oregon Forest Industry Directory to help find industry professionals that can help with specific needs.

Concern: I don't have the materials to start home hardening.

Retrofitting an existing home to be ignition-resistant can be expensive, particularly actions like replacing flammable roofs and siding. Some of these costs can be divided and prioritized into smaller projects. If you are building a new home, the cost of using ignition-resistant materials is roughly the same as using traditional building materials (Quarles and Pohl, 2018). Ignition-resistant features often come with additional benefits, such as greater durability and reduced maintenance. The following are low-cost options for home hardening and some just require time and effort.

- ✓ Install noncombustible metal gutter covers.
- ✓ Cover vent openings with 1/16th- to 1/8th-inch corrosion-resistant metal mesh.
- ✓ Cover chimney and stovepipe outlets with 3/8th- to ½-inch corrosion-resistant metal mesh to prevent embers from escaping and igniting a fire.
- ✓ Caulk and plug gaps larger than 1/16th-inch in siding or around exposed rafters.
- ✓ Install weather stripping around and under garage doors to reduce gaps to less than 1/16th-inch.
- ✓ Remove combustible materials from underneath, on top of, and within 5 feet of a deck.
- ✓ Store all combustible and flammable liquids away from potential ignition sources.
- ✓ Keep a fire extinguisher and tools such as a shovel, rake, bucket, and hose available in your garage for fire emergencies.

Concern: My neighbors haven't mitigated risk on their property.

Some residents in Coos County are rightfully concerned about high hazards on their neighbors' properties and nearby open space. Your home ignition zone might overlap with your neighbor's property. Given the high fire risk in the area, it is important that residents across Coos County create defensible space and harden their homes. Ways to inspire neighborhood-level action include:

- ✓ Work with your community groups to help educate your community about the benefits of defensible space and home hardening.

- ✓ Organize walking tours to visit the property of residents with exemplary defensible space. Witnessing the type of work that can be done, and seeing that a mitigated property can still be aesthetically pleasing, can encourage others to follow suit.
- ✓ Invite your neighbors over for a friendly conversation about the risk assessment in this CWPP. Review resources about defensible space together, discuss each other's concerns and values, and develop joint solutions to address shared risk.

Concern: I don't know if I want to cut trees because of the environmental impact.

Some homeowners in the WUI are concerned that removing trees will destroy the forest and reduce the aesthetic and monetary value of their property. In fact, many dense forests are unhealthy and greatly diverged from historical conditions that were maintained by frequent wildfires. Thinning with both forest health and fire mitigation values in mind is the best thing you can do for both the forest and your home. The reality is that nothing will decrease the aesthetic and monetary value of your home as much as a high-severity wildfire burning all the vegetation in the community, even if your home survives the fire. Forest management can look messy and destructive in the first years following treatment; however, grasses, shrubs, and wildflowers will respond to increased light availability after tree removal and create beautiful ecosystems with lower fire risk. It might even be said that the more trees you cut, the more trees you save from wildfire!

Property owners often enjoy their land even more after conducting effective fuel treatments. Removing trees can open incredible views of mountains, rivers, and rock formations, and wildlife are often attracted to forests with lower tree densities and a greater abundance of understory plants. Reducing fuel loads and increasing the spacing between trees increases the chance that your home and your neighbors' homes will stand strong during a wildfire, and most importantly, it increases the safety of wildland firefighters working to protect your community.

Grasses, shrubs, and wildflowers quickly respond to increased light availability after tree removal, resulting in beautiful ecosystems with lower fire risk and more high-quality wildlife habitat. Photos from the Tillicum Hazardous Fuels Reduction Project, a 4,000-acre thinning project administered by the WADNR Federal Lands

Program on the Okanogan-Wenatchee National Forest. Photo credit: John Marshall. Photos appearing in the 2022 WA DNR Forest Health Assessment Treatment Framework (RCW 76.06.200).

Evacuation Preparedness

Evacuation can weigh heavily on the minds of residents in Coos County. The death of 86 people in Paradise, California during the 2018 Camp Fire, many of whom were stranded on roadways during evacuation, underscores the importance of evacuation preparedness and fuel mitigation along evacuation routes. Roads lined closely with dense, tall vegetation can create flame lengths and heat that are dangerous to evacuees. Roads that may be unpassable during a wildfire event are referred to as potentially non-survivable in this CWPP. Officials start evacuations early to get residents out of danger before roads may become potentially non-survivable, or if an upcoming emergency is anticipated.

Everbridge is the reverse 911 system used by Coos County and is the official site where residents can register their cell phones and email addresses to be sure that notifications reach them during an emergency. Visit the Coos County Citizen Alert - Sign Up to learn about evacuation planning—a simple and crucial action that can save lives.

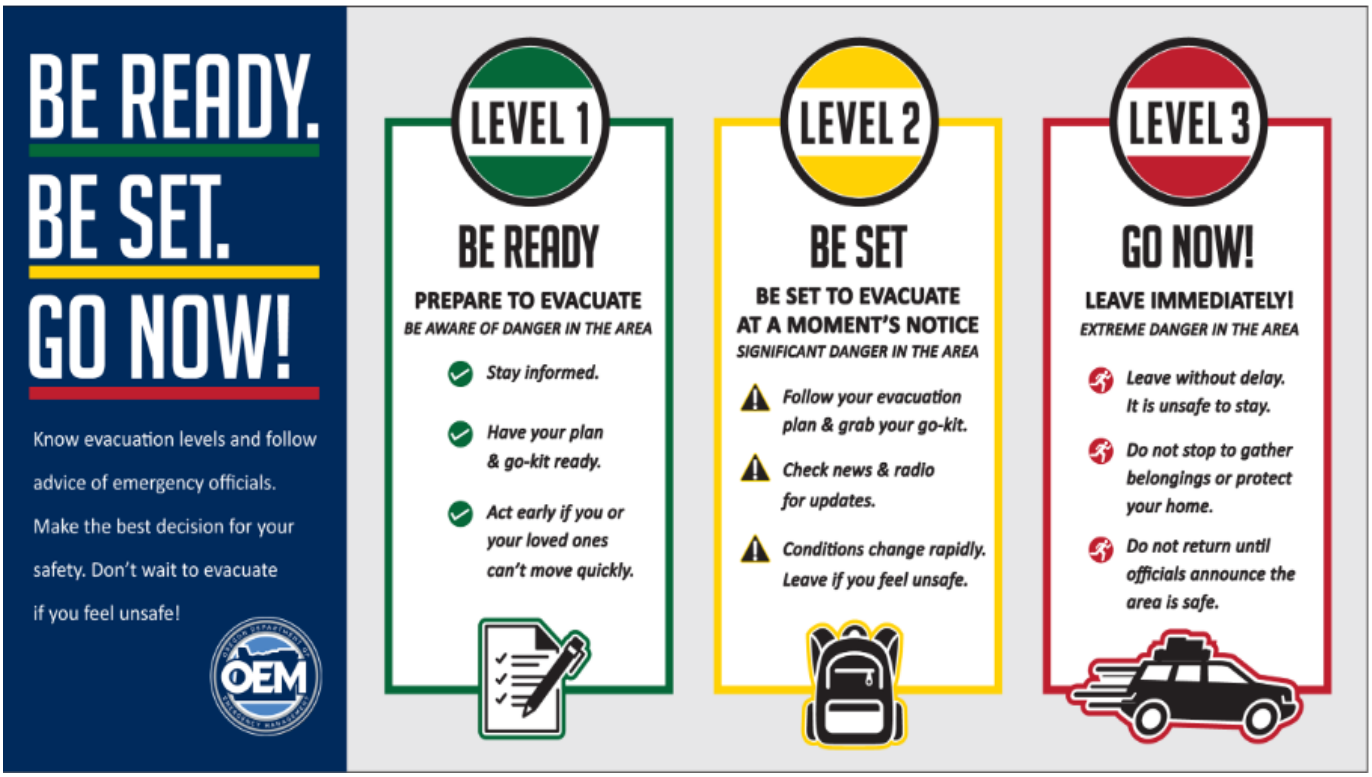
There is a high likelihood of evacuation congestion and long evacuation times during a wildfire in some parts of the community. Areas of evacuation concern are depicted in **Figure 2.f.10**. Some neighborhoods have only one ingress/egress route, and some have roads that are narrow, winding, or difficult to navigate, especially through heavy smoke from a wildfire. Evacuation congestion has been experienced in Coos County during tsunami evacuations, and the same could happen during a wildfire, depending on the fire's location and rate of spread.

During fire season, it is important to keep enough gas in your vehicle so that you can safely evacuate from your home or place of employment. If there were an emergency, you might not have time to fuel up, or pumps might be shut off for safety reasons.

Residents with livestock trailers or large camper vehicles should plan to leave during voluntary evacuation notices to allow time for their preparations and create more space on the roads for other residents during a mandatory evacuation. It is important to have a plan for where to take animal/livestock to reduce some of the chaos and uncertainty created by wildfire evacuations. FEMA provides tips for protecting livestock during a disaster. In Coos County the "Are You Ready" booklet and Prepare Your Pets for Disasters | Ready.gov provide animal evacuation assistance response for wildland fires and natural disasters.

Evacuation preparedness is the responsibility of each resident in Coos County. The best way to get out quickly and safely during an evacuation is to be prepared. Fortunately, 72% of respondents to the CWPP survey have evacuation plans for their family, yet only 17% have practiced evacuating and 33% have not signed up for Everbridge notifications during an emergency. Visit the Coos County Citizen Alert - Sign Up to learn about evacuation planning—a simple and crucial action that can save lives. Ready, Set, Go! is a helpful resource to help with evacuation planning.

Prepare a go-bag and survival basics and have a family emergency plan **before** the threat of wildfire is in your area. Some residents have family members or neighbors with physical limitations who might struggle to evacuate in a timely manner. Develop specific emergency plans that address these unique needs and vulnerabilities **before** an emergency occurs. Parents should also work with their neighbors to develop a plan for how to evacuate children that might be home alone. The Oregon Department of Emergency Management has multiple resources available for residents to help with evacuation preparedness.



Understand the differences between different levels of evacuations in Coos County. Source: [Oregon Wildfire Response and Recovery.]

Signing up for local emergency notifications can also help you leave quickly. Residents should register their cell phones and email addresses through the Everbridge official sign up at [Coos County Citizen Alert - Sign Up], the official emergency notification system for Coos County[2]. Residents can opt-in to enter their contact information and subscribe to the notifications they care about, such as receiving community emergency messages, messages from schools, and more. If residents are solely interested in receiving emergency messages from the County, they can sign up so those are the only messages you receive. The information provided is protected and will not be used for any other purpose, nor shared with any other entity.

Citizens should also explore **Oregon's statewide alert system,** [OR-alert]. This site helps residents to find and register with their local county's system.

[2] Everbridge is the official emergency notification system for Coos County as of the writing of the 2026 Coos County CWPP.

Evacuation Preparedness for Pets and Large Animals

Oregon has multiple key resources for animal owners to prepare for and respond to disasters like wildfire which include emergency response teams, training programs, and planning guides tailored for Oregon residents.

Proactive planning can make all the difference when minutes count. In Coos County, animal owners should prepare early for wildfire season by developing a clear evacuation plan that includes all their animals, especially large animals that will require more time and effort to evacuate.

The Oregon Department of Agriculture gives resources and some specific steps to remember when planning for emergencies with your animals:

1. Identify safe shelter options such as fairgrounds, livestock facilities, or friends' properties outside high-risk zones, and ensure that trailers and transport equipment are ready and accessible.
2. Keep emergency kits stocked with feed, water, medications, and identification documents for each animal to help if other people are involved that may not know all your animals.
3. One of the most important preparations for large animals is to practice loading and unloading to reduce stress during an actual evacuation. Stay informed through local emergency alerts mentioned above and coordinate with neighbors or local animal response teams for support.

The Coos County Animal Evacuation Response Plan outlines procedures for the emergency evacuation, sheltering, and care of domestic animals and livestock during disasters. This thorough plan details the roles and responsibilities of county officials, emergency management, fairgrounds staff, volunteer organizations, and animal owners. It emphasizes coordination among agencies, prioritizes co-location of human and animal shelters, and provides guidelines for shelter setup, intake, daily care, and demobilization. Key components include activation protocols, safety measures, veterinary oversight, documentation requirements, and volunteer expectations. The plan also includes checklists, intake forms, and shelter management procedures to ensure organized and humane treatment of animals during emergencies (Coos County, OR, 2016).

The Oregon Horse Council also offers a Technical Large Animal Emergency Rescue (TLAER) course that provides specialized training for safely managing large animal emergencies. These intensive courses are designed for first responders, veterinarians, animal rescue teams, and large animal owners, offering hands-on instruction in the latest rescue techniques, equipment, and incident planning. Topics include animal behavior under stress, containment and restraint, emergency decontamination, transportation incidents, facility evacuation, humane euthanasia, and rescue scenarios involving water, mud, ice, and unstable ground. Participants receive a certificate upon completion, and the course qualifies for 16 Oregon Veterinary Board CE credits (Oregon Horse Council, n.d.).

Oregon is also home to The Pet Evacuation Team (PET) which is a volunteer-run nonprofit organization based in Central Oregon. PET provides emergency rescue and shelter for animals during disasters and partners with the Red Cross, law enforcement, and emergency services to assist in evacuations caused by wildfires, floods, and other crises. Their fully equipped response trailers and trained volunteers offer critical support, including animal care, sheltering, and assistance in seizure cases.

A technological platform also exists, known as Shelterly. Shelterly is a nonprofit disaster response technology organization that provides tools and training to improve animal emergency management during crises. Shelterly streamlines the tracking and coordination of animal evacuations, sheltering, and reunification efforts, which allows responders to focus on animal safety and well-being. With over 7,000 animals and 1,000 volunteers involved across 20+ counties and 12+ organizations, the system enhances inter-agency communication and efficiency, offering live training sessions and user-friendly tools for large-scale emergencies. More information can be found at HOME | Shelterly.

Accessibility and Navigability for Firefighters

Address signs

Installing reflective address numbers can save lives by making it easier for firefighters to navigate to your home at night and under smokey conditions. Reflective signs are an easy and inexpensive action you can accomplish to protect firefighters and your family. Ask the county or your local municipality to install reflective metal street signs on public roads where they were missing or damaged. Ask your local fire agency if they have an address sign program to provide low-cost signs to residents. Mount reflective address signs on noncombustible posts, not on stumps, trees, wooden posts, or chains across driveways. Chains across driveways might be removed during wildfire suppression to permit access to your property. Make sure the numbers are clearly visible from both directions on the roadway.

If you or your neighborhood have private bridges or culverts, ***post the weight limits!*** *Firefighting equipment will not cross unmarked bridges: posting weight limits may help firefighters access and defend your home. Note: standard emergency vehicle weight limit is 75,000 pounds. Photo credit: The Ember Alliance.*

Driveways

It is important to ensure emergency responders can locate and access your home. Narrow driveways without turnarounds, tree limbs hanging over the road, and lots of dead and down trees by the road may make firefighters choose to not defend your home during a wildfire event (Brown, 1994). Firefighters in Coos County have reported challenges accessing homes at the end of steep, narrow driveways, and sometimes they have been unable to access and protect these homes from fire.

Some roads in Coos County have accessibility and navigability issues, such as narrow widths, inadequate vertical clearance for engines, and heavy fuel loading on the sides of the road. These unsafe road and driveway conditions could turn firefighters away from attempting to defend homes. According to the National Fire Protection Association, driveways and roads should have a minimum of 20 feet of horizontal clearance and 13.5 feet of vertical clearance to allow engines to safely access the roads (O'Connor, 2021). Residents should remove trees and low-hanging limbs along driveways to facilitate firefighter access, as well as removing all dead trees that could fall across the driveway and block access.

Where possible, residents should improve roadway access, and where this is not feasible, it is vital that homeowners take measures to harden their home and create defensible space. Some actions to increase access to your home are simple, such as installing reflective address numbers, and others take time and investment, such as having an engineer rate the weight of any bridges and widening driveways to accommodate fire engines.

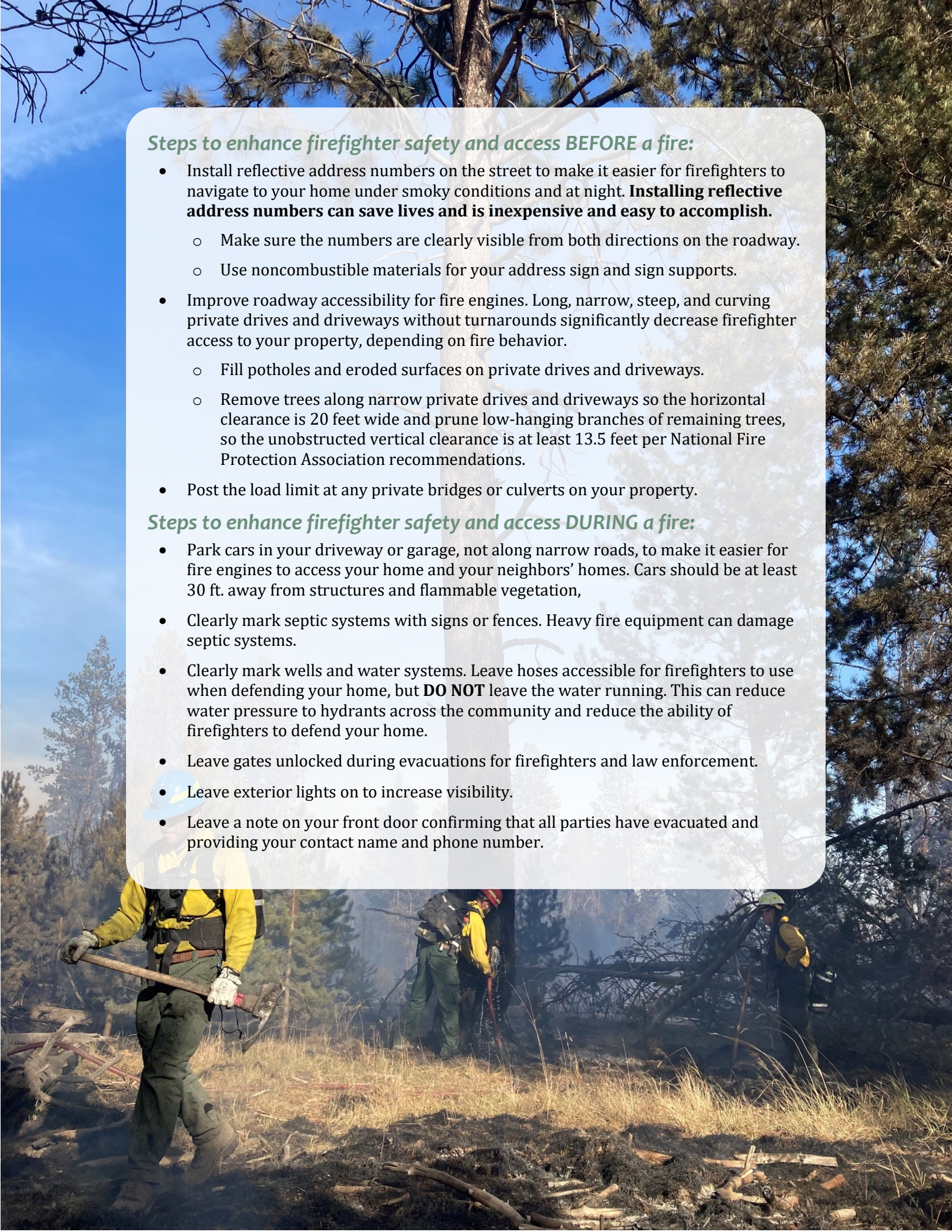
If you have other gate codes, share them with your local fire department so they can non-destructively access your property in an emergency.

Support Your Local Fire Protection District

Education and outreach are incredibly important to Coos County–connecting with their constituents is a vital part of building relationships and providing the highest quality services. Your support for Coos County can improve the safety of this community:

- Consider volunteering with your local fire protection district. Most fire protection districts in Coos and all Search and Rescue personnel are primarily staffed by volunteers, so volunteers are vital for keeping your communities safe. Volunteers receive training in structural firefighting, wildland firefighting, and emergency medical response. Volunteers are also needed to help with administrative tasks, community events, fundraising, and education. Please contact your local agency to inquire about becoming a volunteer.
- Provide financial support in the form of monetary donations or initiate local ballot measures that provide tax revenue for the FPD so they can respond to residents in their time of need.
- Attend events hosted by Coos County about wildfire mitigation and emergency preparedness. Protecting your home from wildfire can also protect your local firefighters. Share information you learn with neighbors to build community resilience and magnify the impact of individual actions.

Photo of firefighters at the 2024 Shelly Road Fire. Credit: Justin Ferren



Steps to enhance firefighter safety and access BEFORE a fire:

- Install reflective address numbers on the street to make it easier for firefighters to navigate to your home under smoky conditions and at night. **Installing reflective address numbers can save lives and is inexpensive and easy to accomplish.**
    - Make sure the numbers are clearly visible from both directions on the roadway.
    - Use noncombustible materials for your address sign and sign supports.
- Improve roadway accessibility for fire engines. Long, narrow, steep, and curving private drives and driveways without turnarounds significantly decrease firefighter access to your property, depending on fire behavior.
    - Fill potholes and eroded surfaces on private drives and driveways.
    - Remove trees along narrow private drives and driveways so the horizontal clearance is 20 feet wide and prune low-hanging branches of remaining trees, so the unobstructed vertical clearance is at least 13.5 feet per National Fire Protection Association recommendations.
- Post the load limit at any private bridges or culverts on your property.

Steps to enhance firefighter safety and access DURING a fire:

- Park cars in your driveway or garage, not along narrow roads, to make it easier for fire engines to access your home and your neighbors' homes. Cars should be at least 30 ft. away from structures and flammable vegetation,
- Clearly mark septic systems with signs or fences. Heavy fire equipment can damage septic systems.
- Clearly mark wells and water systems. Leave hoses accessible for firefighters to use when defending your home, but **DO NOT** leave the water running. This can reduce water pressure to hydrants across the community and reduce the ability of firefighters to defend your home.
- Leave gates unlocked during evacuations for firefighters and law enforcement.
- Leave exterior lights on to increase visibility.
- Leave a note on your front door confirming that all parties have evacuated and providing your contact name and phone number.

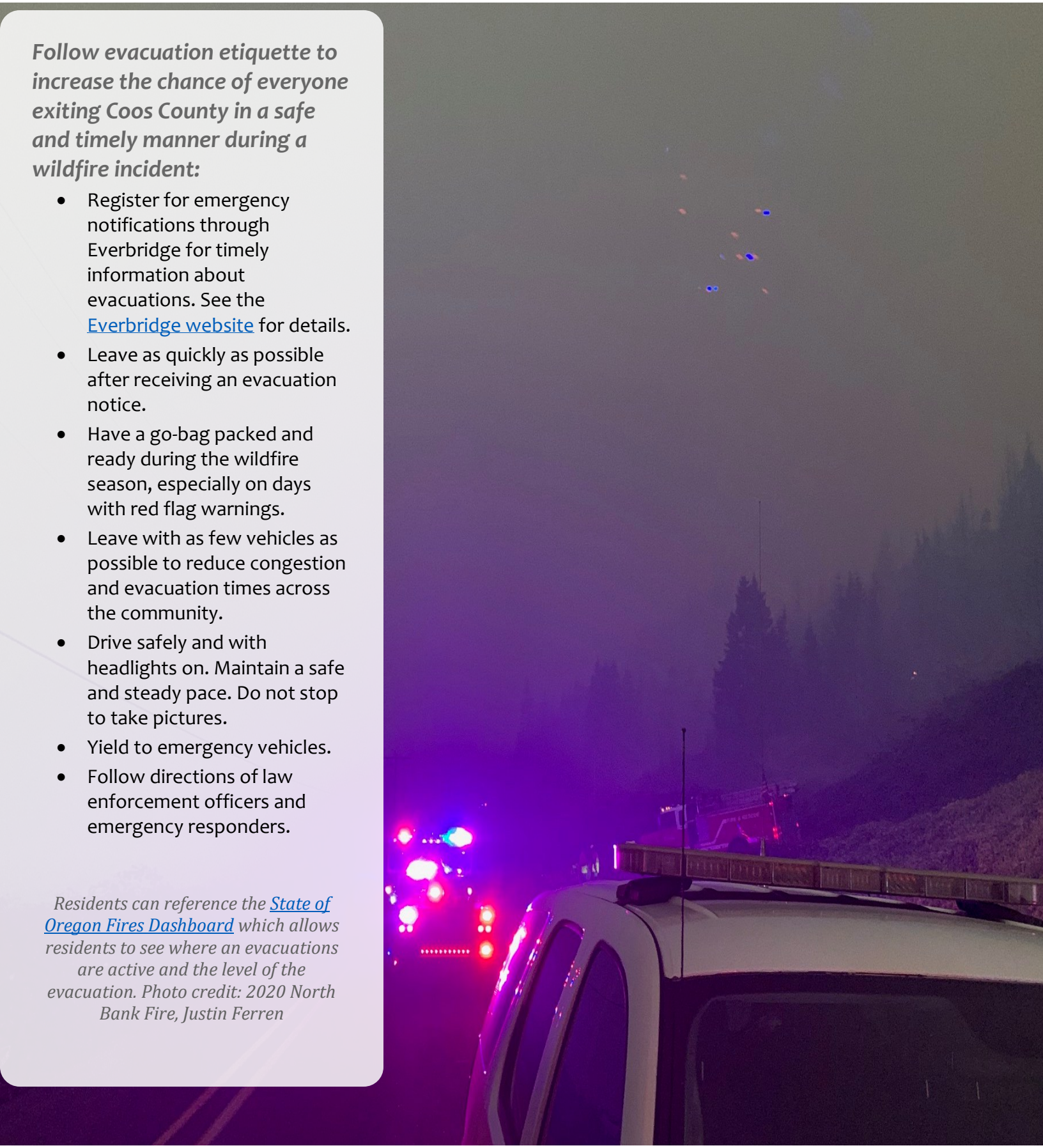
Resources for Homeowners

Who do I contact to sign up for emergency messaging?	Coos County Citizen Alert - Sign Up
How do I learn more about evacuation preparedness?	Ready, Set, Go! Coos County Emergency Management
Where do I get up-to-date information on ongoing evacuations and emergencies?	Coos County Citizen Alert - Sign Up Coos County Emergency Management Facebook
How do I know where fires are burning in Oregon?	State of Oregon Fires Dashboard
Where do I learn about current burning restrictions and current fire danger levels in Coos?	Coos Forest Protective Association
Where do I find resources for how to prepare for before and recover after a fire?	Oregon Red Cross
Where do I find out more about specific home hardening steps to follow?	Oregon State Fire Marshal Your local fire protection district
How do I learn more about invasive weed mitigation and cost-share programs that will cover up to 40% of the cost of herbicide?	Coos County Weed Control District Advisory Board
How do I learn about the most effective ways to eliminate gorse from my property?	Gorse Action Group
How do I learn more about fire-resistant landscaping?	Master gardeners with OSU Extension Services in Coos County Fire-Resistant Plants for Home Landscape
Who do I contact to become a volunteer with my local fire protection district?	Your local fire protection district

Follow evacuation etiquette to increase the chance of everyone exiting Coos County in a safe and timely manner during a wildfire incident:

- Register for emergency notifications through Everbridge for timely information about evacuations. See the Everbridge website for details.
- Leave as quickly as possible after receiving an evacuation notice.
- Have a go-bag packed and ready during the wildfire season, especially on days with red flag warnings.
- Leave with as few vehicles as possible to reduce congestion and evacuation times across the community.
- Drive safely and with headlights on. Maintain a safe and steady pace. Do not stop to take pictures.
- Yield to emergency vehicles.
- Follow directions of law enforcement officers and emergency responders.

Residents can reference the State of Oregon Fires Dashboard which allows residents to see where an evacuations are active and the level of the evacuation. Photo credit: 2020 North Bank Fire, Justin Ferren



3.b. Recommendations for Coos County Agencies and Partners

Evacuation Planning and Capacity

There is a high likelihood of evacuation congestion and long evacuation times during a wildfire. Some neighborhoods have only one ingress/egress route, and some have roads that are narrow, winding, or difficult to navigate, especially through heavy smoke from a wildfire. Evacuation times for individual residents could exceed several hours in some parts of Coos County due to the high density of homes and limited number of egress routes.

Consideration should also be directed at barriers that may impede rapid evacuation. For example, downed power lines could pose a significant barrier to safe evacuation if the wires remain live. Communities could initiate conversations with local utility districts to assess new power lines could be buried underground and existing ones relocated. To further complicate efforts, evacuation efforts and coordinating across multiple jurisdictions often slows planning and implementation.

Many roads throughout the community are narrow and lined with dense vegetation that could create non-survivable conditions during wildfires. Under extreme fire weather conditions, 30% of roadways in Coos County could experience non-survivable conditions (**Figure 2.f.10**). **Mitigation actions along sections of road with high risk for non-survivable conditions during a wildfire can increase the chances of survival for residents stranded in their vehicles and decrease the chance that roadways become impassable due to flames.**

Some roads in Coos County have been well mitigated by removing tall trees and saplings, removing limbs on the remaining trees, and keeping grass mowed (left images). Other roads could experience potentially non-survivable conditions because they are lined by thick forests that have an abundance of ladder fuels and/or surface fuels such as downed logs and branches (right images). Photo credit: The Ember Alliance.

Reliable technology to provide warnings and information about evacuations can help residents feel confident in their ability to evacuate during a wildfire. Coos County Emergency Management communications use Everbridge, also known as reverse 911, to communicate evacuation orders to residents. Coos County should actively extend awareness about Everbridge to citizens, businesses, and Tribes that are unaware of the program.

Recommendations to improve evacuation preparedness:

- Conduct tree removal, cut low limbs, and mow grass along roadways to increase the likelihood of survivable conditions during a wildfire. Prioritize the roads with the most traffic and congestion (**Figure 2.f.10**). See **Section 4.b** for recommended approaches to reduce wildfire risk along roadways.
- Coordinate with the Coos County Sheriff's Office to conduct evacuation drills to practice safe and effective evacuation for the entire County.
- Coordinate with Coos County Emergency Management to increase participation in Everbridge Alert across Coos County. Unfortunately, only 67% of respondents to the CWPP survey indicated that they have signed up for Everbridge Alert: this number should ideally be 100%.
- Regularly test the Everbridge system to ensure timely and accurate communication could occur during an evacuation.
- Educate residents about warning systems, protocols for evacuation orders, and evacuation etiquette prior to the need to evacuate the community. Communicate the importance of following evacuation orders; **failing to leave the community in a timely manner during a wildfire emergency can put first responders at risk.**
- Encourage residents to leave with only one vehicle per household to reduce congestion.
- Encourage all households to develop family evacuation plans and to pack go-bags that are at the ready. Fortunately, 72% of respondents to the CWPP survey have evacuation plans for their family, yet only 17% have ever practiced evacuating. Ready, Set, Go! is a helpful resource to help with evacuation planning.
- Encourage residents to work with their neighbors to develop a plan for helping each other with evacuation if a resident is not at home, school-aged children or pets might be home alone, or residents have mobility impairments and need special assistance.
- Encourage residents to evacuate whenever they feel unsafe, even before receiving mandatory evacuation orders. All residents should leave promptly when they receive a mandatory evacuation order. This means having a family emergency plan in place and go-bags prepacked.
- Make sure warnings and alerts can be understood by all residents, including those with English as a second language and with hearing impairments.
- Reach out to: Oregon Department of State Lands (owner of Elliott State Forest), gardening associations, master gardeners, chamber of commerce for small business, Oregon State Parks, timber companies, law enforcement, and possibly high school programs to recruit ideas and possible volunteers to continue the mitigation due to flora that will grow back so quickly in Coos County.

Accessibility and Navigability for Firefighters

The following recommendations will increase the likelihood that emergency responders can locate and access all structures in Coos County:

- Roadway access should be improved where feasible by widening road networks, adding a center lane on 2-lane roads, and/or creating turnarounds and pullovers to accommodate fire engines and two-way traffic during evacuation. Prioritize roads for improvement include the highway 101 corridor and each of the single entrances like Jetty Road, Fahy, North Bank, Randolph, Two Mile, and Bullards which are pinch points along with the all-important Coquille bridge for firefighters going in as large groups of evacuees are attempting to leave.
- Partners should work to remove trees from along roads to reduce the chance of non-survivable conditions occurring during wildfires. Priority locations are identified in **Figure 2.f.10**.
- Encourage residents to call OSFM to request help remove trees along driveways and prune low-hanging branches to increase horizontal and vertical clearance. According to the National Fire Protection Association, driveways and roads should have a minimum of 20 feet of horizontal clearance and 13.5 feet of vertical clearance to allow engines to safely access the roads (O'Connor, 2021).
- Grants to fund roadway improvements and roadside fuel treatments should be applied for. Widening roads and removing fuels along roadways can be time-consuming and expensive, but this work is vital for the safety of residents and first responders. Residents, community leaders, and CCFPDs can work together to share costs and apply for grants to facilitate this important work.

It would not be possible for a firefighting engine to enter this one-lane dirt road if residents were also evacuating. Photo credit: The Ember Alliance

Mitigating Invasive Weeds

Invasive weed species are considered a major threat to agriculture, native ecosystems, and public lands that can outcompete native species for resources, disrupt food chains, and alter habitats. Coos County takes mitigating invasive species, especially plants, very seriously. The county has a dedicated Noxious Weed Advisory Board that classifies and manages invasive plants based on their impact and spread. Most members of the Advisory Board are volunteers and dedicate their time to help support landowners and protect native plants in Coos County. The Gorse Action Group is a collaborative group of representatives from federal, state, and county agencies and nonprofit organizations seeking to work together to assess the extent of gorse and create a strategic plan for control on the southern Oregon coast.

A high-intensity wildfire was fueled by gorse in 2007 near Whiskey Run Beach. Photo credit: The Ember Alliance.

From a wildfire standpoint, invasive plant species like gorse, Scotch broom, and Armenian blackberry are particularly concerning and widespread across Coos County (**Figure 3.b.1**). Gorse grows in dense monocultures with high fuel loads, and it is highly flammable. Both gorse and Scotch broom contain oils in their leaves that easily ignite and burn hot. Armenian blackberry can grow under trees and act as ladder fuels that carry wildfire from the surface into treetops.

Treating invasive species on your property can protect your neighbor's property by preventing it from spreading to theirs. Money and efforts spent on private property to help people with maintenance is a good investment, especially to stop small infestations before they grow. Below are some suggestions for weed mitigation in Coos County. **See full list of Action items identified by agencies and partners in Coos County related to weed mitigation in the prioritization table in Section 3.e. Priority Action Items.**

- Recommendations to help agencies and partners prioritize invasive weed mitigation in Coos County as identified in the Gorse Action Group designation zones (**Figure 3.b.1**). Zones are as follows:
    - Core containment zones – Heavily infested areas with large, contiguous patches of gorse, such as around Bandon. Mitigation in these zones takes large, well-planned investments of time and effort.
    - Containment EDRR (early detection, rapid response) zone - Areas where prevention of gorse is prioritized, ideally before seeding. **Outlying patches are most important to treat to prevent spread and seed bed establishment—this is a proactive approach that is more cost-efficient and effective than waiting for gorse to establish and spread.**
    - Control zones – Areas primarily in core containment zones where there are active policies, enforcement, and ongoing, funded work to remove gorse. Sometimes these areas align with other management goals, such as BLM areas of critical environmental concern. An example of work in the control zone is ongoing creation of a fuel break between state land and BLM land to give people time to evacuate.

    - Control EDRR zones – Areas that Coos and Coquille Watershed Associations have identified as having small patches of gorse and that warrant immediate, targeted treatments. Examples include the Pony Creek area that provides drinking water for North Bend and the area around Tenmile Lake.
- Provide support to residents and other property owners to eradicate weeds in early detection, rapid response areas. Essentially, for any invasive plant, it is critical to address small patches before they spread and when the problem is manageable. Support to residents can include cost-share programs for herbicide, such as that offered by the Noxious Weed Advisory Board, funding from the National Resources Conservation Service (NRCS), training for residents on effective weed mitigation (such as field trips to the GAG gorse removal demonstration plots on Highway 101), or joint funding for field technicians with water advisory boards to conduct weed mitigation.
- Provide accurate information to residents on the most effective methods for mitigating invasive species.
    - Information on mitigation of gorse is available from the Gorse Action Group.
    - Information on mitigation of Himalayan blackberry is available from OSU Extension Service.
    - Information on mitigation of Scotch broom is available from OSU Extension Service.
    - Residents can reach out to the Coos County Noxious Weed Advisory Board for information about the safe application of herbicide.
- Identify long-term funding opportunities for cross-boundary treatment of invasive species.
- Gorse control requires at least 3-5 years of concerted efforts to get to a maintenance level of control, and then maintenance might need to go on for 20-30 years. It is critical to commit to long-term, high-quality treatments and maintenance to battle pernicious invasive weeds. Treating fewer, priority acres effectively over multiple years has a bigger impact than treating many acres once and then walking away. Funding for gorse removal available from NRCS, and cost-share programs to subsidize the cost of herbicide is available from the Noxious Weed Advisory Board .
- Protect pollinators: Most herbicide for gorse has minimal off-target effects. It is recommended that people apply herbicide in the winter or after plants bloom and in the early morning when pollinators are less active.
- Provide weed wash stations for heavy machinery that can be utilized by power companies, FPDs, and other operators of heavy machinery that might pick up seeds in their tires and inadvertently transport them to other locations. Coos County Public Works does a very effective job at washing seeds off their heavy machinery, so it can be done!
- Reduce fuels and evacuation plans for key infrastructure with partners such as BPA, Pacific Power, Coos-Curry Electric, City of Bandon, Coos County, ODOT, CFPA, Bandon Airport, Pacific View, Bandon School District, SCHHC, Care Facilities, Port of Bandon. Consultations with OSFM/Bandon Fire/CFPA need to occur for successful planning.
- A Defensible Space Programs for agriculture needs to be started and would benefit NRCS, Cranberry Association, local ranchers, and local farmers who would all be included as partners in the planning.

"We can't do superficial work, or it creates a temporary sense of accomplishment and risk reduction and then people move on." ~ Gorse Action Group

Ongoing gorse mitigation in the "Donut Hole" area of Bandon spearheaded by residents and the Gorse Action Group is beginning to reduce the cover of gorse. However, consistent funding and ongoing concerted efforts are necessary to make this area and many like it in Coos County safer for homes due to the potential for extreme fire behavior in patches of gorse. Photo credit: Google Earth.

Photo of gorse being mulched (top photo) and burned (bottom photo) in the "Donut Hole" area of Bandon. Photo credit: The Ember Alliance and Debbie Mueller.

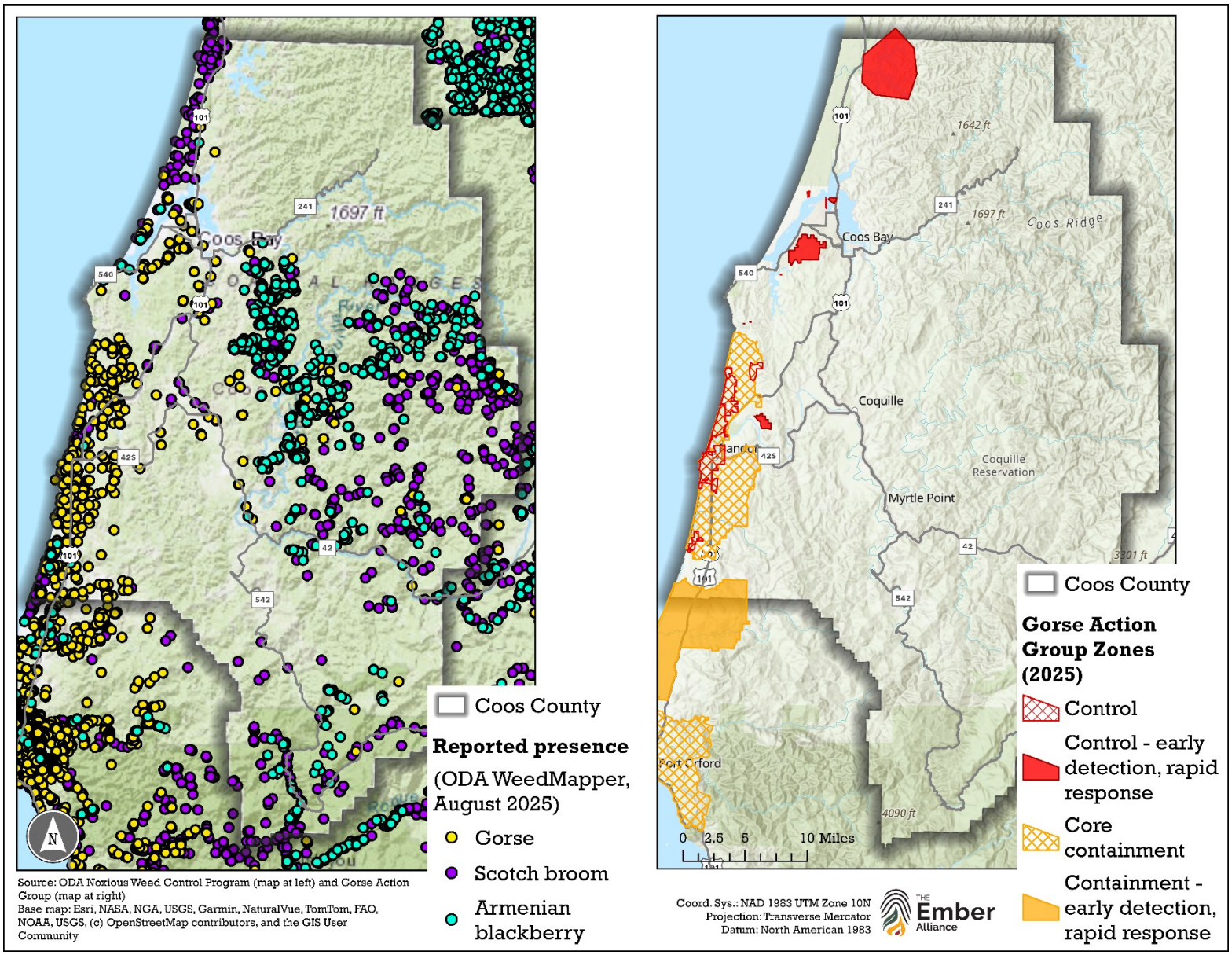


Figure 3.b.1 *Reported presence of gorse and scotch broom in Coos County and the surrounding area as of August 2025 (left). These noxious, highly flammable plants might be present in locations not indicated on the map because reporting is incomplete. Gorse Action Group Zones (right) for targeted action to mitigate gorse and reduce its spread in Coos and Curry Counties. Source: ODA Noxious Weed Control Program and Gorse Action Group.*

Slash Management

Coos County, Tribes, PCL Land Management, The Dyer Partnership Engineers & Planners, Coos County Forestry and Solid Waste Departments, the Oregon Department of Land Conservation and Development (DLCD), the BLM, and the ODF, should work together to develop a slash management strategy for the area. This can, and should, include a combination of slash management techniques as described in the section **Approaches to Slash Management**.

Recommendations for slash management:

- Coos County Recycling should consider making the slash disposal site free to residents and nearby neighbors. Providing a program that will pick up the slash material and bring it to the slash disposal site will also reduce barriers for residents to complete mitigation work thoroughly. This program could be either hosted by the county or by neighbor-to-neighbor mutual aid.

- ODF and BLM should establish a Pile Burn Cooperatives (PBC) with support from The Central Oregon Prescribed Burn Co-Op. PBCs are groups of neighbors that get together to help burn slash piles, often with support from their local fire protection district. ODF and BLM can provide technical support, training, and permits for prescribed burns.
- Follow example from an OSFM grant supported project in Oakridge, Oregon. In 2023, the South Willamette Forest Collaborative was awarded $200,000 through the Community Wildfire Risk Reduction Grant to implement wildfire mitigation efforts. Debris generated from these treatments was managed by a local contractor, Brock's Wood Lot. The resulting wood materials were repurposed into subsidized firewood for home heating and provided to campgrounds, generating revenue. Additionally, byproducts such as sawdust from firewood and slab cutting have been sold to gardeners and agricultural producers. This debris removal contract has enabled Brock's Wood Lot to create three new jobs and pursue expansion plans, including the construction of a kiln to treat firewood for interstate sale. The kiln is expected to be fueled by woody debris that would otherwise go to waste, further maximizing the use of materials and reducing disposal impacts.

A pile burn of juniper slash was conducted by the Bureau of Land management along Millican Road. Credit: Prineville BLM plans additional pile burning | Central Oregon Fire Information.

Outreach and Education

Coos County should continue to engage with community members using a variety of methods, including social media, local publications, a possible neighborhood ambassador program, and education materials for visitors of short-term rentals. The following priority recommendations may fall to different entities or partners within and around Coos County.

Smoke Preparedness

Smoke Management means controlling smoke from burning leftover logging debris, so it doesn't bother nearby areas. It depends on things like your location, the weather, what's being burned, and how it's burned. Prescription, or planned fires, do emit smoke, but less smoke than wildfires because they are intentionally planned on days with good smoke dispersion and good weather conditions to help move the smoke from heavily populated areas.

If you or neighbors are planning on burning slash remaining from your mitigation in your neighborhood, remember that all landowners must obtain a burn permit in accordance with the Oregon Smoke Management Plan. You must contact Coos Forest Protective Association and start the Smoke Management - Burn Planning process. Please see Coos Forest Patrol for more information and links about smoke in Coos County.

Social Media

Social media is a powerful tool when used properly to connect with audiences. FEMA has a Wildfire and Outdoor Fire Safety Social Media Toolkit that is a great starting place for fire protection districts to begin gaining an audience with their constituents and sharing important fire safety information. Put Fire to Work highlights programs and organizations that successfully engage audiences around wildland fire and prescribed burning. CalFire's Ready for Wildfire campaign is active and collaboratively created to engage and encourage people to act on wildfire preparedness.

Neighborhood Ambassador Program

Expanding and providing resources for the **Neighborhood Ambassador Program** could help residents better understand wildfire risks and spark coordinated action that effects positive change in Coos County. Coos County Emergency Management has limited staff, and most rural fire protection districts are staffed by volunteers, so a neighborhood ambassador program would add tremendous capacity to accomplish goals set forth in this CWPP. Plus, it can empower residents to take a leadership role, organize their community, and affect real change to reduce risk and increase emergency preparedness. The neighborhood ambassador approach requires engaged volunteer ambassadors and a dedicated lead coordinator. See **Table 3.b.1** from the guide *Fire adapted communities neighborhood ambassador approach: Increasing preparedness through volunteers* for effective activities that neighborhood ambassadors can undertake (Wildfire Adapated Partnership, 2018).

Table 3.b.1*Potential activities for the neighborhood ambassador program. Table adapted from (Wildfire Adapated Partnership, 2018).*

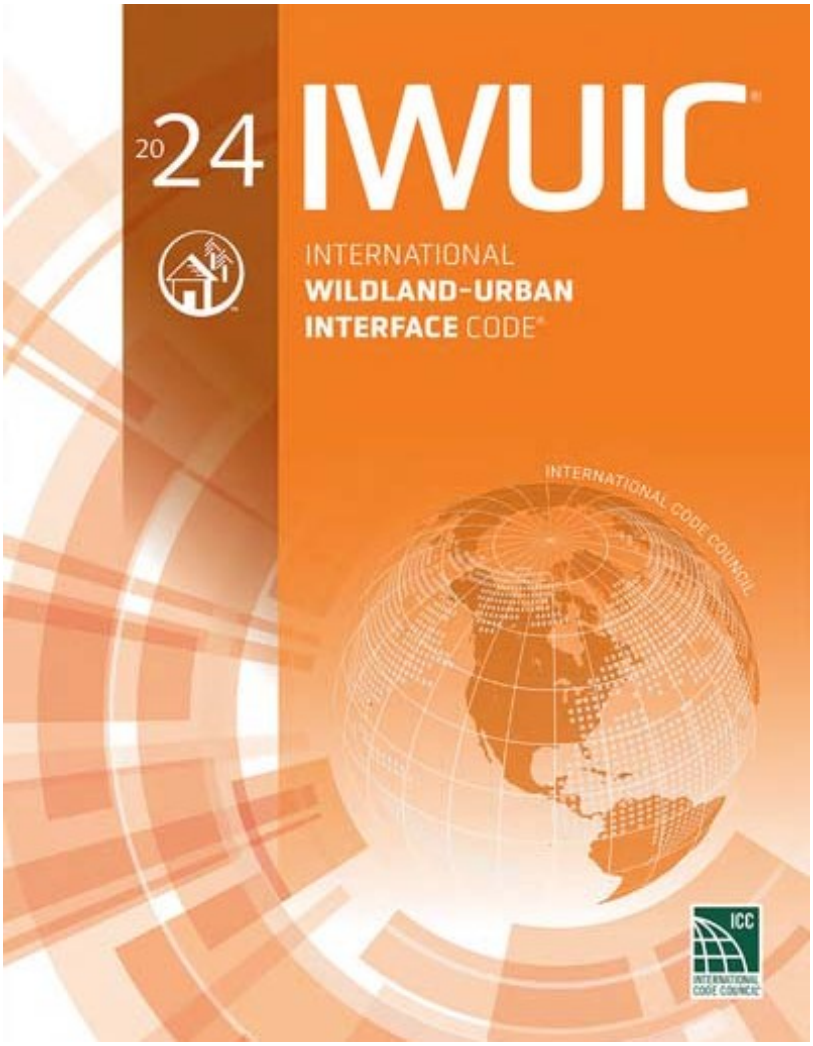
Example activity	Ambassador responsibility	Coordinator responsibility
Educational programs about defensible space and home hardening	Gauge interest of neighbors and select topics. Find meeting location.	Arrange for specialists to make presentations. Advertise program through HOA newsletters, social media, etc.
Emergency planning	Organize an event for people to ask law enforcement and firefighters about emergency planning and evacuation. Encourage residents to work with neighbors to develop a plan for evacuation if a resident is not at home, school-aged children or pets	Provide information to residents about emergency planning and go-bags. Arrange for specialists to make presentations.

Example activity	Ambassador responsibility	Coordinator responsibility
	are home alone, or residents have mobility impairments and need special assistance.	Advertise program through flyers, HOA newsletters, social media, etc.
Pile Burn Cooperative involvement	Work with Coos County to determine if slash pile burning is an appropriate method of slash management in your neighborhood or community. Gauge interest level among residents around pile burning.	Work with Coos County and partner organizations to plan pile build and burn workshops. Facilitate pile burn days among residents within your neighborhood or community.
Community chipping day	Secure HOA buy-in and request financial support. Select a date and organize event logistics. Encourage neighbors to attend.	Secure fuels module availability and grants or other financial support. Address liability and safety concerns. Advertise program through HOA newsletters, social media, etc.
Defensible-space walking tour	Identify homeowners with exemplary defensible space. Select a date and organize event logistics. Encourage neighbors to attend.	Arrange for fuel treatment specialists to attend and make presentations. Provide handouts and other educational material about defensible space. Advertise program through HOA newsletters, social media, etc.
Defensible space projects	Work with neighbors to identify high-priority project locations using insights from this CWPP. Secure HOA buy-in and request financial support. Select contractors and solicit bids. Oversee project completion.	Work with a certified forester for insights about effective treatment location and prescriptions, following guidelines in this CWPP. Identify potential contractors. Write scope of work for contract. Inspect project upon completion. Celebrate success through social media posts and newspaper articles.
Roadside fuel treatment projects	Work with neighbors to identify roads and driveways with potentially non-survivable conditions using insights from this CWPP. Secure HOA buy-in and request financial support. Select contractors and solicit bids. Oversee project completion.	Work with a certified forester for insights about effective treatment location and prescriptions, following guidelines in this CWPP. Identify potential contractors. Write scope of work for contract. Inspect project upon completion. Celebrate success through social media posts and newspaper articles.
Firewise designation	Become a Firewise Designated County	Support annual community-wide education program

WUI Building Codes

It is recommended that Coos County adopts the International Wildland Urban Interface Code to support home hardening. Codifying home hardening and defensible space can encourage adoption of the practice and provides landlords an incentive to implement these practices, thereby protecting renters. Consider amending the code recommendations to match current research recommendations (Maranghides et al., 2022):

- Home and structure building setbacks should be structure-centric, not parcel-centric. Cross-boundary structure separation should always be a consideration.
- Existing high-density housing areas should prioritize home hardening as opposed to defensible space.
- New high-density developments should have complete defensible space and buildings that are extremely resistant to ignition.
- Replace wooden fences with noncombustible materials and keep at least 8 feet away from the home. Keep double combustible fences (Two parallel fences made of combustible materials - like wood or plastic - placed close to each other) at least 20 feet away from the home. Wood fences can serve as pathways for wildfire to travel between vegetation and structures and from structure to structure.



The International Wildland-Urban Interface Code establishes requirements for land use and the built environment within designated wildland urban interface for the safeguarding of life and property from the intrusion of wildfire.

Short-Term Rental Certification

Short-term rentals are home or apartment rentals that are leased for 30 days or less at a time, usually called vacation rentals, Airbnb's, or Vacation Rentals By Owner (VRBOs). Local governments have struggled to regulate short-term rentals; a study published in 2018 found that 20% of short-term rentals in the U.S. did not have smoke detectors and 58% didn't have fire extinguishers (Kennedy et al., 2018). Visitors are often unaware of the risks that come with their vacation location. Short term rentals without defensible space, clearly defined escape routes, or basic fire safety measures put visitors and neighbors at high risk in the event of a wildfire.

Landowners and property owners who rent out their spaces should implement rigorous short-term rental guidelines to protect the safety of visitors as well as the properties of the neighboring homeowners in Coos County. In Oregon, short-term rental rules differ widely across cities and counties. Although Oregon lacks overarching legislation on the matter, numerous local governments have established their own policies to find a balance between supporting tourism and protecting the interests of permanent residents. Host2Host - Home is an excellent non-profit trade association in Oregon that helps to educate and advocate for hosts wanting to rent out their space. It is recommended that Coos County develop a short-term rental (STR) certification program to help Coos County offer a strategic way to balance economic growth and community well-being concerning wildfire preparedness. According to the National League of Cities (NLC) who offer research and analysis on short-term rental regulations, certified STRs can help contribute to a "vibrant visitor economy while maintaining quality standards that attract repeat guests (National League of Cities, 2022)".

Table 3.b.2 *Recommended mitigation goals for obtaining Short Term Rental Licenses in Coos County. Goals are adapted from Firewise USA®.*

Action	Goals
Home Ignition Zones	Create defensible space around homes and outbuildings according to the Oregon State Fire Marshal Guidelines. See **Figure 3.a.2** and **Table 3.a.1** for specifics.
Landscaping	Maintain Immediate Zone (0-5 feet from the home) to clean, unburnable conditions with litter and duff (Decaying leaves and branches covering the forest floor) removed regularly.
Roofing and Vents	Install and maintain a Class-A roof with mesh covers on vents.
Decks and Porches	Keep decks free of flammable materials such as propane tanks or firewood piles. Use non-combustible deck materials when possible.
Siding and Windows	Clean and maintain windows and siding. Use ignition-resistant siding and tempered multi-paned windows when building or remodeling.
Emergency Responder Access	Maintain a 20-foot-wide driveway with 13.5 feet of overhead clearance for emergency vehicles. Ensure that street and house numbers are clearly marked from the road, and there is enough turnaround space for fire trucks in front of your house.
Informed Renters	Provide evacuation maps to renters with multiple ways out of the neighborhood. Require renters to sign up for emergency alerts while they are visiting. Share current fire ban information with renters before they visit, share current locations of fire extinguishers, and close off outdoor fire pits when they are not allowed to be used.

3.c. Tribal Priorities

The Coquille Indian Tribe and the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, both of which actively contributed to the development of the Coos County Community Wildfire Protection Plan (CWPP), play an essential role in managing, co-managing, and protecting the lands in Coos County and their ancestral, cultural, and natural resources. Both have Tribal Councils that direct community and natural resource programs to continue to assess future vulnerabilities and risks carefully to developed plans to address risks, such as wildfire. Both have also established robust emergency management programs and cultivated strong partnerships with other Tribes, as well as federal, state, and local agencies throughout Coos County.

In collaboration with the Charleston Rural Fire Protection District, North Bend Fire and Rescue, and the Coos Forest Protective Association, the Tribes' efforts reflect a holistic approach that integrates cultural values with contemporary fire science. Numerous projects outlined in the CWPP focus on mitigating wildfire risks to homes, infrastructure, and public health through strategies such as fuel reduction, shaded fuel breaks, and prescribed burns. The implementation of specific projects for each Tribe depends on landownership, as illustrated in **Figure 2.a.1**.

Regardless of landownership, all projects should reflect a deep reverence for the land. As stated in the Coquille Indian Tribe Comprehensive Land Use Plan of 2024, "Reverence for the Land is shown today by the way the Coquille Forest is managed." Many forest ecosystems have evolved alongside fire and cultural burns, relying on them to sustain healthy plant and animal communities. Low-intensity burns help thin overcrowded trees, reducing competition for sunlight, water, and nutrients, which ultimately makes the remaining trees more resilient to drought, disease, and pests. The Coquille Forest comprises 14 separated parcels of timberland in eastern Coos County, totaling 5,410 acres, on which the Tribe conducts timber harvests to support health care, education, and Elder services.

One of the Tribal Priorities outlined in the Coquille Comprehensive Land Use Plan of 2019 is to "reduce the number of backyard burns" occurring in Coos County. These burns contribute to increased smoke and airborne toxic pollutants, posing health risks to residents. Many of the materials being burned could be repurposed for firewood, landscaping, or other uses. However, Coos County currently faces limited alternatives to burning and landfill disposal. To address this, the implementation of codes, ordinances, and regulations should be considered to prohibit and better manage open burning practices. An example of an alternative that could be considered is from the OSFM's January Report which highlights as small business, Brock's Wood Lot, that collects debris removed from fuels reduction work and turns it into subsidized firewood for home heating, sawdust for gardens and farms, and has plans to build a kiln that runs on debris that can't be turned into sellable firewood.

Timber sales can often open the way for safe and effective prescribed and cultural burns which, in turn, help to maintain a resilient forest ecosystem.

Other priorities, such as developing community fuel breaks in high-risk areas, is a key priority for both Tribes, as outlined in the 2022 CTCLUSI Hazard Mitigation Plan, 2025 Coquille Resilience Management Plan, and 2017 Coquille Indian Tribe Emergency Operations Plan. This CWPP outlines place-based projects across Coos County that can support and expand the Tribes' ongoing efforts on their lands. Additionally, the 2018 Coos Head Area Master Plan proposed formalizing evacuation routes as part of trail planning. This CWPP includes an analysis of Coos County's evacuation routes and their safety (**Figure 2.f.10**) which can serve as a valuable resource for the Tribes as they plan and formalize their own evacuation strategies.

Fuel breaks serve as defensible zones around communities and cultural sites. Sometimes, timber sales can serve as a source of fuel reductions by thinning stands and decreasing the density of fuels. On Sunday, August 10th, 2025, CTCLUSI marked a historic milestone by launching their first-ever Tribal timber sales. These sales are taking place on approximately 15,000 acres of forest land that were restored to CTCLUSI under the Western Oregon Tribal Fairness Act (WOFTA) of 2017. The three timber projects include:

- **Heluu Timber Sale**: 35 acres within the Lake Tract in Lane County
- **Hawatit Timber Sale**: 36 acres within the Tioga Tract in Coos County
- **Taqnis Timber Sale**: 22 acres within the Lake Tract in Lane County

"It has been a long journey to this point; but time was necessary to create the policies and procedures that allow CTCLUSI to steward our lands in perpetuity. All three timber sales adhere to the CTCLUSI Forest Management Plan. The Environmental Review was also approved by CTCLUSI through utilization of the Tribes' ITAMP status (Gaines, 2025)". Timber sales can often open the way for safe and effective prescribed and cultural burns which, in turn, help to maintain a resilient forest ecosystem.

Home hardening examples, such as those outlined in **Table 3.a.1**, are strongly recommended for all Tribal structures and surrounding areas. These practices play a critical role in protecting homes and cultural resources while contributing to the restoration of fire-adapted landscapes. Home hardening includes structural modifications and defensible space strategies that reduce vulnerability to wildfire, such as ember-resistant vents, fire-resistant roofing materials, and vegetation management within the immediate zone around buildings.

Other actions, such as using mycelium injections to help decompose dry-organic matter (thus lowering fuel loads) and planting native vegetation, further strengthen fire resilience while promoting ecological and cultural benefits. Native plants not only support increasing biodiversity and traditional food systems but also have fire-resistant characteristics. For example, woodland strawberry (*Fragaria vesca*) and nodding onion (*Allium cernuum*) are edible species that spread readily, require minimal maintenance, and possess low resin content, making them less likely to ignite during a wildfire. Integrating these species into landscaping efforts enhances both fire safety and food sovereignty, aligning with Tribal values of stewardship and sustainable land use.

Decisions on where and how to involve Tribes, need to honor Tribal sovereignty and ensure meaningful engagement in the decision-making process.

3.d. Priority Action Items

Table 3.d.1 details strategic actions for residents, Coos County, Tribes, community groups, public land managers, county, state, and federal agencies, and non-profit conservation groups to accomplish within the next 5 years to promote fire adapted communities and emergency preparedness. Some activities have low financial cost but require a fundamental shift in attitudes and behavior to prioritize wildfire risk mitigation. Other actions are more substantial and require commitment and collaboration across the community to pool resources, apply for grants, and make incremental steps towards meaningful change. Many of these recommendations are aspirational and will require expanded capacity and funding, as well as patience and hard work from community members and leaders to make lasting changes.

Actions are organized by CWPP goals. Some actions fall under multiple goals, so an effort was made to place them under the most relevant goal. Many actions align with the three goals of the National Cohesive Wildland Fire Management Strategy: resilient landscapes, fire adapted communities, and safe and effective wildfire response. Actions also align with strategic goals of other existing plans, such as the 2023 Coos County Multi-Jurisdictional Natural Hazards Mitigation Plan, as indicated in the table.

Priorities for recommendations were determined collaboratively and reflect relative priority planning at the time this CWPP was written. Priorities are indicated as first, second, and third. Feedback from the resident survey and questionnaire for the CWPP Steering Committee and partners helped informed these priorities. This prioritization does not encourage recommendations to be conducted in any specific order or timeframe, nor does it discourage actions that are not explicitly covered in this CWPP. Land managers, county administrators, and residents should reevaluate fire risks and reprioritize recommendations as conditions change over time.

Table 3.d.1 -*Priority action items for the 2026 Coos County CWPP. Note: Acronyms for lead/partner agencies are in the acronym table at the beginning of the CWPP. CCFPD stands for Coos County Fire Protection Districts and encompasses Coos County Fire Departments (CCFDs) and Coos County Rural Fire Protection Districts (CCFPDs).*

Goal 1: Hazard Assessment and Inventory

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Continue collaboration and coordination	Involve CWPP members on NHMP Committee.	CCEM, OSFM, CIT, CTCLUSI, CWPP Steering Committee	Second	2019 CIT Comprehensive Land Use Plan objective 1.7 OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Create a post-fire mitigation plan	Create a post-fire mitigation plan to help emergency managers, partners, and residents prepare for and respond to post-fire flooding.	CIT, CTCLUSI, CCEM, CCFPDs, USFS, BLM	Third	OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes
Improve fire behavior predictions	Work with researchers to develop a custom fuel model for gorse and other flammable noxious weeds to improve fire behavior predictions.	ODF, OSU	Third	Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes

Goal 2: Wildfire Safety and Awareness and Goal 3. Mitigate Risks in the Home Ignition Zone

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Form a CWPP Implementation Committee, potentially tied to the Coos and Curry CWPP Workgroup	Form an CWPP Implementation Committee to continue the collaborative momentum fostered throughout the CWPP process. This committee could be tied to the planned Coos and Curry CWPP Workgroup being led by CFPA and OSFM.	Coos and Curry CWPP Workgroup, CFPA, OSFM, CCEM, Coos Fire Defense Board	First	Cohesive Strategy – Fire Adapted Communities
Hire staff to support HIZ mitigation and monitor CWPP implementation	Obtain additional resources and capacity to implement recommendations in the CWPP. This might include hiring: County Wildfire Education and Outreach Coordinator and a part-time GIS manager to develop and update the centralized database for mitigation updates and CWPP progress. Additional staff will help CCEM effectively prepare, respond, and pivot when different emergencies arise.	CCEM	First	Cohesive Strategy – Fire Adapted Communities

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Ensure critical facilities have emergency operations and infrastructure in place	All critical facilities such as hospitals need to have emergency operations and infrastructure in place to deal with power outages and water supply issues for at least 2 weeks. Hospitals also need to consider local air systems to protect patients and employees from smoke impacts during wildfires. A specific need for funding to install local air systems and water storage was noted for Bay Area Hospital.	Hospital, CCEM, Red Cross, hospitals	First	Coos County NHMP action 22-WS-01 and 23-MH-08 Cohesive Strategy – Fire Adapted Communities
Attend public events about wildfires, emergency preparedness, and noxious weeds to learn more	Learn about ways you can protect your home and support your local firefighters. hosted by organizations like CCEM, CFPA, GAG, OSU Extension, or your local fire department. Share information you learn about wildfire mitigation, emergency preparedness, and evacuation with neighbors to build community resilience and magnify the impact of individual actions. Plus, free hotdogs and ice cream are sometimes provided at CFPA open houses!	Residents	First	OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Create linked defensible space	Work with neighbors with overlapping HIZ to create safer conditions and better tactical opportunities for wildland firefighters. Finding funding to create more linked defensible space and assist home owners establish effective defensible space in the first 5 feet surrounding their homes.	Residents with support from CFPA, CCFPDs, OSFM	First	2019 CIT Comprehensive Land Use Plan objective 1.7.4 OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Develop a neighborhood ambassador program	Apply for grants to create a firesafe council / neighborhood ambassador program. Coos County Emergency Management has limited staff, and most rural fire protection districts are staffed by volunteers, so a neighborhood ambassador program would add tremendous capacity to accomplish goals set forth in this CWPP. Plus, it can empower residents to take a leadership role, organize their community, and affect real change to reduce risk and increase emergency preparedness.	Coos and Curry CWPP Workgroup, OSFM, CFPA, CTCLUSI, CCEM, CCFPDs	Second	OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Provide public engagement and education opportunities	Continue providing public engagement and education opportunities about vegetation management, defensible space, home hardening, invasive species control, and emergency preparedness. Target professionals, home and landowners, and contractors.	CCEM, CFPA, OSFM, CCFPDs, CCNWAB, CTCLUSI, CIT, GAG	Second	CTCLUSI NHMP action 2B4 2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 1.d OSFM Fire Adapted Oregon The 20-Year OR Landscape Resilience Strategy goal 3 Cohesive Strategy – Fire Adapted Communities

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Reduce unsafe burning practices while encouraging safe burning	Target fire prevention campaigns in recreational areas and areas with people experiencing homelessness. Decrease number of unsafe backyard burns by providing information on safe practices and appropriate timing for conducting burns. See **section 4.a.** for information on safe burning practices. Encourage reusing woody materials where appropriate to lessen harmful smoke. Encourage fewer open fires by unhoused individuals, especially in areas with highly flammable fuels, such as gorse.	CIT, CTCLUSI, CFPA, CCFPDs, CCEM, municipalities, residents	Second	2024 CIT Integrated Solid Waste Management Plan OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Ensure new development is fire resistant	Ensure new development in the wildfire urban interface (WUI) uses wildfire mitigation measures such as fire-resistant building materials, firebreaks, and access for fire trucks. Improve communication between the county, cities, and CCFPDs about building code enforcement, including clearly defining roles and responsibilities.	Coos County Planning Dept., CIT, CTCLUSI, individual municipalities	Second	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 4 CTCLUSI NHMP actions 1A and 1C2 Coos County NHMP action 23-WF-01 and 22-WF-02 OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Increase community participation in formal wildfire programs	Encourage more Firewise/ OSFM Defensible Space Program and IBHSS Wildfire Prepared communities and events.	OSFM, CCEM	Second	OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Develop consistent education material	Agree on consistent outreach materials and messaging across agencies regarding wildfire risk reduction, including HIZ mitigation and home hardening, and emergency preparedness.	CCEM, CCFPDs, OSFM, CFPA, CIT, CTCLUSI	Third	OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Demonstrate HIZ mitigation	Complete exemplary HIZ mitigation around a public building to demonstrate proper mitigation to residents. Organize community-wide home hardening and defensible space tours to demonstrate exemplary HIZ work. Provide resources so participants can assess wildfire risk on their properties.	CWPP Steering Committee, CTCLUSI, neighborhood ambassadors	Third	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 2 CTCLUSI NHMP action 1D OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities
Pursue financial incentives for HIZ mitigation	Explore option to create a minor tax break or waiver for residents who request an HIZ inspection and complete recommended work.	CWPP Steering Committee	Third	OSFM Fire Adapted Oregon Cohesive Strategy – Fire Adapted Communities

Goal 4: Enhance Wildland Fire Response

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Increase coordination among fire agencies in Coos County	Finalize the updated mutual aid agreement for fire agencies in the county. Regularly update the annual operating picture. Provide yearly ICS training with Fire Chiefs, Search and Rescue, law enforcement, and other partners to improve inter-agency communication and coordination. Ensure consistency in radio channel use. Establish protocols for unified command. Expand MOUs to include hazard mitigation, preparedness, response, recovery, and the reciprocity of medical professionals between isolated communities. Plan for an establish roles for unified command. Explore the use of Everbridge for cross-agency communication.	Coos Fire Defense Board, CCFPDs, CCEM, OSFM, CFPA, USFS, BLM, CIT, CTCLUSI	First	2019 CIT Comprehensive Land Use Plan objectives 1.1.5, 1.6.5, 1.7.2, 2.3.1 Coos County NHMP action 22-MH-02 and 23-MH-03 OSFM Response Ready Oregon Cohesive Strategy – Safe & Effective Wildfire Response
Increase capacity for fire agencies in Coos County	Increase overall capacity to respond to wildfires and other emergencies in the county through increased funding and staffing.	CCFPDs, CFPA, CCEM, OSFM, CIT, CTCLUSI	First	OSFM Response Ready Oregon Cohesive Strategy – Safe & Effective Wildfire Response
Increase planning across agencies to stabilize resources	Succession planning and training and collaboration across agencies to stabilize resources.	CCFPDs, CFPA, CCEM, OSFM	First	OSFM Response Ready Oregon Cohesive Strategy – Safe & Effective Wildfire Response
Maintain and enhance communication towers	Finish defensible space around all towers. Purchase backup batteries, generators, and/or solar panels for all towers. Install AI fire detection cameras on all towers.	CEM, Coos Fire Defense Board, CCFPDs	First	Coos County NHMP action 23-MH-01 and 23-MH-02 Cohesive Strategy – Safe & Effective Wildfire Response
Post signs for limitations to emergency personnel access	Post the load limit at any private and/or county bridges or culverts.	Residents, Coos County Public Works	First	Cohesive Strategy – Safe & Effective Wildfire Response
Improve gate and building access for emergency personnel	Ensure all locked gates and buildings can be opened by emergency personnel when necessary.	Residents, CCFPDs	First	Cohesive Strategy – Safe & Effective Wildfire Response
Rebuild Hauser Rural Fire Protection District	Help to rebuild and reoutfit Hauser RFPD after the fire in October 2025 destroyed most everything.	CCFPDs, CCEM, OSFM	First	Cohesive Strategy – Safe & Effective Wildfire Response

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Upgrade and maintain water infrastructure for firefighting	Regularly test and upgrade existing infrastructure for firefighting. Inventory and map water sources (tagged with mile marker locations) to be made available to Coos County FPDs for easier access during emergencies. Identify areas that need additional hydrants or cisterns for fire response.	CCEM, Coos Fire Defense Board, CCFPDs, CFPA, ODF, OSFM, Water Districts	Second	ODF Forest Management Plan goal 4.4 OSFM Response Ready Oregon Cohesive Strategy – Safe & Effective Wildfire Response
Annex unprotected structures in existing CCFPDs	Inform residents in currently unprotected areas that CCFPDs might not be able to protect their home since they are not part of a fire district. Encourage residents to organize a ballot measure to annex into existing CCFPDs. Unprotected areas of particular concern are Allegany, Daniels Creek and S. Coos River Lane, and the outskirts of Powers.	CCFPDs, residents	Second	Cohesive Strategy – Fire Adapted Communities and Safe & Effective Wildfire Response
Increase opportunities for fire assignments for CCFPDs	Provide more opportunities for CCFPDs to participate in conflagration response across the state under the Oregon Conflagration Act. Providing training and assignments for staff to qualify as task force leaders and above so they can operate like the Coos/Curry Tender Task Force.	CCFPDs, Coos Fire Defense Board, OSFM, CFPA	Second	OSFM Response Ready Oregon Cohesive Strategy – Safe & Effective Wildfire Response
Make personal water resources accessible for firefighters	See **Section 3.a**	Residents	Second	Cohesive Strategy – Safe & Effective Wildfire Response
Increase volunteerism to support emergency response	Volunteer to help your local community! CCFPDs and CFPA can work with high-school students/young adults to provide training and volunteer opportunities, potentially through programs and grants from the Higher Education Coordinating Commission.	Residents, Boy Scouts, Girl Scouts, CCFPDs, CFPA, School Districts, CIT	Second	2019 CIT Comprehensive Land Use Plan objective 1.7.3 Cohesive Strategy – Fire Adapted Communities and Safe & Effective Wildfire Response
Improve road and address signage across the district	Use visible, reflective signage for navigating during an emergency. Provide subsidized signs (needs grant funding). Push message that if people don't post their addresses, firefighters cannot and will not find them.	ODOT, County Road & Bridge, Residents, OSFM, Landowners	Third	Cohesive Strategy – Safe & Effective Wildfire Response
Define potential operation delineations (PODs)	Define POD boundaries across the county, not just USFS land to help with fire response.	CCFPDs, ODF, CFPA, USFS, BLM	Third	Cohesive Strategy – Safe & Effective Wildfire Response
Provide multi-hazard training	Continue revising training to focus on multi-hazard instead of just earthquakes. Coordinate a class entitled “post-earthquake safety evaluation” with funding from local fire departments for their staff.	CCEM, CCFPDs	Third	Cohesive Strategy – Safe & Effective Wildfire Response
Explore and implement innovative technology	Explore and implement innovative technology to support emergency response, such as using drones to monitor fire spread, installing mobile Starlink setups in each emergency vehicles. Creating a mobile supply cache/trailer with hoses, Starlink, and other equipment.	CCFPDs, OSFM, CFPA, CCEM	Third	Cohesive Strategy – Safe & Effective Wildfire Response

Goal 5: Enhance Evacuation Preparedness

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Coordinate and pre-plan with all fire agencies and law enforcement	Conduct cross-agency training on evacuation protocols. Regularly meet to discuss evacuation roles and responsibilities. Consider developing shelter-in-place protocols.	CCEM, Coos Fire Defense Board, CCFPDs, ODOT, OSFM, CIT, CTCLUSI, municipalities	First	2019 CIT Comprehensive Land Use Plan objectives 1.7.2 and 2.3.1 CTCLUSI NHMP action 2D OSFM Response Ready Oregon Cohesive Strategy – Safe & Effective Wildfire Response
Maintain and improve roadway access for firefighters	Widen roads, add a center lane, and/or create turnarounds and pullovers where it is feasible to accommodate fire engines and two-way traffic during evacuation.	ODOT, County Road & Bridge, residents, landowners	First	Cohesive Strategy – Safe & Effective Wildfire Response
Remove vegetation along roads for safety and accessibility	See recommendations and priority locations in **Section 4.b**	See **section 4.b**	First	Cohesive Strategy – Safe & Effective Wildfire Response
Identify and improve evacuation routes	Identify and map all roads, private drives, and logging trails. Identify fire evacuation routes, including alternate evacuation routes, and share routes with law enforcement and the public, as appropriate. Cost includes data collection, planning, and printing maps. Maintain and improve surfaces on all major evacuation routes. Develop a plan to identify and improve alternate evacuation routes for major roadways for wildfire. Areas of concern with need for improvement are communities with single entrances or high-use areas are indicated in **Figure 2.f.10**.	ODOT, CCEM, Coos County Public Works, CCFPDs, CIT, CTCLUSI, OSFM, municipalities	First	2019 CIT Comprehensive Land Use Plan objective 2.3 and 4.3 Coos County NHMP action 16-MH-07 and 23-MH-04 Cohesive Strategy – Safe & Effective Wildfire Response
Enforce fire code requirements for road construction	Ensure consistent understanding and enforcement of fire code requirements for road construction (e.g., road widths and turn arounds) across Coos County agencies and CCFPDs. Coordinate with Coos County Planning Department about the importance of enforcing fire codes for new development proposals. Develop a mechanism for enforcement, which will require funding, staff, and coordination across agencies.	CCEM, OSFM, Coos Fire Defense Board, CCFPDs, Tribes, County Zoning and Planning	First	Coos County NHMP action 22-WF-02 Cohesive Strategy – Safe & Effective Wildfire Response

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Increase community preparedness for evacuations	Conduct public education campaigns to increase the percentage of residents registered for Everbridge Alert. Identify ways to generate evacuation notices for tourists, seasonal workforce, and other visitors who might not be aware of or have access to Everbridge Alert. This might include electronic roadside signage on major highways. Continue to offer go-bag trainings. Conduct additional training on evacuation preparedness and resources. Produce engaging and accessible resources for residents about evacuation preparedness.	CCEM, OSPR, ODOT, municipalities, CCFPDs, CIT, CTCLUSI, residents	First	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 1 2019 CIT Comprehensive Land Use Plan objective 2.3 CTCLUSI NHMP action 2B Cohesive Strategy – Fire Adapted Communities
Develop an animal evacuation plan	Develop a county-wide animal evacuation plan. Set up a Community Animal Response Team, potentially in concert with the Sheriff's Posse to provide animal evacuation support. Ensure all emergency managers are aware of caches of paperwork, animal pens, and crates that CCEM acquired from ODA. Stage these caches in strategic locations, such as the Fairgrounds and animal shelters. Follow-up with ODA to standardize content in crates so they can support 50 large animals and 50 small animals Encourage residents to develop their own livestock evacuation plan.	CCEM, Sheriff's Posse, ODA, residents	Second	Cohesive Strategy – Fire Adapted Communities and Safe & Effective Wildfire Response
Improve communication technology for evacuations	Offer a platform for people to self-report needs for evacuation assistance, such as Everbridge or Community Connect. Utilize Genasys for evacuation planning and decisions. Communicate with Watch Duty to make sure accurate evacuation information appears on the app. Encourage residents to acquire satellite phone, Starlink, or radios where cell service is limited.	CCEM, Coos Fire Defense Board, CCFPDs, CTCLUSI, municipalities	Second	CTCLUSI NHMP action 2C2 and 2D Cohesive Strategy –Safe & Effective Wildfire Response
Practice evacuations	Coordinate with the Coos County Sheriff's Office to conduct evacuation drills in high-risk areas to practice safe and effective evacuations.	CCEM, CCFPDs, CIT, municipalities, residents	Third	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 1.d Cohesive Strategy – Fire Adapted Communities and Safe & Effective Wildfire Response

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Maintain evacuation centers	Identify and maintain community evacuation centers that can serve as command centers and provide food, housing, and supplies during emergencies.	CCEM, CCFPDs, Red Cross, municipalities	Third	Coos County NHMP action 23-MH-19

Goal 6: Fuels Reduction

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Increase capacity to implement fuel treatments	Secure funding for year-round crews that can help with pile burning, prescribed burning, fuels mitigation, and community outreach in addition to wildfire response. This is necessary due to longer fire season and widespread need for mitigation work. Hire additional forestry staff, including GIS administrators.	CCEM, CFPA, CCFPDs, CTCLUSI	First	2022 CTCLUSI Comprehensive Economic Development Strategy OSFM Fire Adapted Oregon The 20-Year OR Landscape Resilience Strategy goal 4 Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes
Apply mitigations that reduce the likelihood and impact of wildfires associated with utility infrastructure	Continue the regular programs of enhanced vegetation management practices, equipment inspection, and accelerated correction of conditions that may cause an energy release or safety risk in areas of elevated risk as described in Sections 7 and 8 of the following Wildfire Mitigation Plan from PacifiCorp and sections 6 and 7 of the Coos-Curry Electric Wildfire Mitigation Plan.	PacifiCorp and Coos-Curry Electric Cooperative	First	PacifiCorp 2026–2028 Base Wildfire Mitigation Plan Coos-Curry Electric 2024 Wildfire Mitigation Plan
Mitigate risk along Coos Bay Rail Line	Conduct additional vegetation management and maintenance along rails. This will require purchasing specialized equipment for vegetation management along railroads. Provide fire prevention and response training for rail workers.	Coos Bay Rail Line, CFPA	First	Cohesive Strategy – Fire Adapted Communities

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Conduct fuels treatments in strategic locations	Conduct fuels treatments in strategic locations to reduce wildfire severity such as near high-risk communities, along roads, under powerlines, and around critical infrastructure. This includes removing gorse and other flammable vegetation. Some treatments also seek to restore landscapes that are resilient to fire, drought, insects, and disease. See **section 4.b** for priority project areas. Increased capacity and funding for implementation are needed to accomplish many of the priority treatments in this CWPP.	**See section 4.b**	First	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 2 CTCLUSI NHMP action 6C ODF Forest Management Plan goal 4.1-4.3 Gorse Management Plan objective 1.2 OSFM Fire Adapted Oregon NW Forest Plan Amendment – Fire Resilience and Forest Stewardship Themes The 20-Year OR Landscape Resilience Strategy goal 1 Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes
Continue collaboration with land management partners	Provide accountability on projects and continue to participate in cross-boundary mitigation programs such as work with the Elliott State Forest, ODF, and CFPA.	CWPP Implementation Committee	Second	ODF Forest Management Plan goal 4.1-4.3 Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes
Promote safe burning practices	Promote programs that empower safe burning practices, such as the Oregon Certified Burn Manager Program. Consider forming pile burn associations and prescribed burn cooperatives. Educate residents on benefits and needs for pile burning and broadcast burning to restore ecosystems and reduce fire risk.	OSFM, CFPA, CCEM	Second	Cohesive Strategy – Fire Adapted Communities
Increase capacity for slash removal	Expand capacity for removing slash via chipping, biochar, and biofuel, potentially in coordination with Curry County (this will also require changes in regulations and barriers to permitting biofuel/biochar). Assess the potential of using gorse as a source of biofuel to aid in weed removal and control. Expand months when green slash can be dropped off at dumps for free to increase participation. Organize brush-clearing events with youth programs or volunteer groups to support residents with mobility impairments or other needs.	CCEM, Coos County Solid Waste Department, OSFM, ODEQ, CIT	Second	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 2 Gorse Management Plan objective 2.4 Cohesive Strategy – Fire Adapted Communities

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic Alignment**
Support for low-income residents	Provide waivers for low-income residents for chipping, removal of noxious weeds, and/or dropping off slash at dumps for free.	CCEM, Coos County Solid Waste Department	Third	Gorse Management Strategy goal 3.5 Cohesive Strategy – Fire Adapted Communities
Explore alternative methods of slash disposal	Explore the use of mycelium injections to help break down woody fuels and increase biodiversity on landscape. Encourage residents to reuse and recycle discarded wood.	CIT, CTCLUSI, other interested parties	Third	Cohesive Strategy – Fire Adapted Communities
Restore riparian ecosystems to enhance fire resilience	Conserve and restore stream-side vegetation, like willows and cottonwoods, to reduce soil erosion, moderate post-fire flooding, and potentially slow down the spread of wildfire due to elevated fuel moisture.	BLM, USFS, Coos Watershed Association, Coquille Watershed Association, CIT, CTCLUSI, landowners	Third	2019 CIT Comprehensive Land Use Plan objective 3.2 ODF Forest Management Plan goal 9 Coos Watershed Association 2025-2029 Strategic Plan goal 2 Cohesive Strategy – Resilient Landscapes 2023 Coos County Estuarine Resilience Action Plan

Goal 7: Noxious Weed / Invasive Species Control

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic alignment**
Continue mitigating weeds in priority locations	See priority locations in **Section 4.c**	See **Section 4.c**	First	2025 Coquille Resilience Management Plan – Wildfire Stewardship goal 2 Gorse Management Plan objective 1.2, 2.2, 2.3, 3.1 Coos County Noxious Weed Management Plan goal 1 Coos County NHMP action 22-MH-05 and 23-MH-05
Increase capacity to mitigate weeds and commit to ongoing maintenance	Establish a seasonal Gorse Crew to mitigate gorse on private and public land. This will require dedicated funding and personnel. Maintain the GAG to oversee implementation of the Gorse Management Plan. Fund Vegetation Manager for City of Bandon. Encourage landowners to work with local watershed associations, non-profits, ODA, and NRCS to control gorse and other noxious weed infestations.	CWMA, CCFPDs, City of Bandon	First	Gorse Management Plan objective 1.4 , 2.1, and 3.1 Coos County Noxious Weed Management Plan goal 3 Cohesive Strategy –Resilient Landscapes 2023 Coos County Estuarine Resilience Action Plan action 28

COUNTY WIDE RECOMMENDATIONS 2026-2031				
Objective	**Key Activities**	**Lead / Partners**	**Priority**	**Strategic alignment**
Increase funding for weed mitigation	Encourage landowners to apply for NRCS funding for invasive species removal and cost-share with Coos County Noxious Weed Advisory Board. Expand cost share programs for invasive species removal, herbicide purchase, vegetation management, and defensible space work. Promote tax levy for consistent funding for GAG and other weed management groups.	GAG, CWMA, CCNWAB, ODA, ODPR, NRCS, municipalities	First	Gorse Management Plan objective 1.1, 2.3, and 3.1 Coos County Noxious Weed Management Plan goal 4 Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes 2023 Coos County Estuarine Resilience Action Plan action 28
Continue and expand enforcement	Continue enforcement of noxious weed regulations in municipalities, including regular inspections. Explore areas where additional noxious weed regulations might help prevent the establishment and spread of gorse, Scotch broom, and other invasive species.	City of Bandon, other municipalities, CCNWAB, GAG	Second	Gorse Management Plan objective 3.1 Cohesive Strategy – Fire Adapted Communities
Expand outreach and education about noxious weeds	Create accessible and engaging outreach material about best practices for weed mitigation. Continue attending outreach events (e.g., Coos County Fair) to share information about noxious species, particularly for new residents. Create informational signage and boot brushes at recreation areas. Distribute literature about mitigating noxious weeds, especially in areas of new infestations.	CCNWAB, GAG	Second	Gorse Management Plan objective 1.2, 2.3, 2.4, and 3.4 Coos County Noxious Weed Management Plan goal 2 Cohesive Strategy – Fire Adapted Communities and Resilient Landscapes
Prevent spread of weeds	Establish boot brush and weed-wash stations around Coos County, particularly in the Bandon area. The CCNWAB is currently establishing a Whiskey Run bike-washing station funded by the BLM RAC. Develop plans for post-fire weed abatement. Promote hygiene and decontamination of machinery.	CCNWAB, ODPR, GAG, Coos County Public Works	Second	Gorse Management Plan objective 1.2 Coos County Noxious Weed Management Plan goal 1 Cohesive Strategy –Resilient Landscapes
Continue monitoring spread of noxious weeds	Utilize/find volunteers for surveying and monitoring of invasive plants. Regularly submit weed occurrences to "WeedMapper" and/or EDDMapS West.	ODA, GAG, CWMA, CCNWAB, ODPR, BLM, USFS, municipalities	Third	Gorse Management Plan objective 1.3 ODF Forest Management Plan goal 1.3 Cohesive Strategy –Resilient Landscapes

3.e. Barriers to Action in Coos County, OR

Wildfire mitigation in Coos County, Oregon faces a complex set of challenges that could hinder progress and increase community vulnerability. Evaluating the Community Wildfire Protection Plan (CWPP) is an important step in staying fire-ready, but it can be tough for communities without enough staff or volunteers. That's why support from local, state, and federal partners is so valuable. These partners can bring the tools, knowledge, and extra hands needed to help Coos County assess how well the CWPP is working.

Key barriers that must be addressed in Coos County to accomplish the goals of the CWPP include:

- **Limited capacity.** Rural fire protection districts are mostly run by volunteers, and volunteerism is down across the county and the country. Coos County Emergency Management and other agencies have small staff, and the Coos County Weed Advisory Board is run by volunteers. Additional capacity is critical for these agencies to accomplish goals in this CWPP.

  For example, there is a need to reduce fuel loads along county roads for safety, but keep in mind that Coos County maintains approximately 529 miles of roadway and 124 bridges. Maintenance activities include road grading, ditching, culvert replacement and cleaning, spraying for vegetation control, paving and patching (cold mix), shoulder rocking, brushing and mowing, striping, signage, and bridge maintenance. They have a shrinking budget and workforce that means they need to prioritize where they work and cannot accomplish treatments on all roads. The CWPP analyses and priority projects can help support targeted and strategic action by Coos County Road Department.

  A key recommendation in this CWPP is starting a neighborhood ambassador program or similar community-led efforts to organize neighborhoods, lead projects, and keep momentum going. This type of program would add tremendous capacity to the county and empower residents to take a leadership role, organize their community, and affect real change to reduce risk and increase emergency preparedness.

  Another exciting development that can bolster capacity is the planned Coos and Curry CWPP Workgroup being led by CFPA and OSFM. This workgroup (made up of representation from the Fire Adapted Communities wheel, fire response agencies, public land management agencies, school districts, public health, business recovery/chamber of commerce groups) would help coordinate partners, seek funding, and implement findings in the Coos and Curry County CWPPs.
- **Limited funding.** Additional funding is needed to increase staff capacity, buy equipment, provide grants to local agencies and communities, and undertake other actions outlined in the CWPP. Reliance on competitive grants makes it difficult to launch large-scale projects, and funding for long-term maintenance work and purchasing the equipment to maintain defensible space, like that required for mitigating gorse, is difficult to come by. Residents in Coos County might need to agree to tax levies to support work that help make their families, homes, and community safer. CCEM, OSFM, and other partners will continue to apply for grants and find other funding sources as well.
- **Checkboard landownership.** The mix of public, private, and industrial land in Coos County necessitates that people work across jurisdictional boundaries and pool resources to address common goals and shared risk.
- **Rapid regrowth of vegetation.** The relatively cool and moist climate in parts of Coos County supports abundant plant growth, necessitating a commitment to regular maintenance and retreatment. This is true for treatments along roads, treatments around homes, treatments to remove noxious weeds, and treatments to restore fire adapted ecosystems.
- **Lack of public awareness of wildfire risk.** The annual risk of wildfire is relatively low in Coos County compared to other parts of the Pacific Northwest. However, large wildfires have occurred in the past, and consequences could be high if wildfire were to start and spread on a hot, dry, and windy day. People have a lot of competing demands for their attention, including other natural hazards that occur more frequently in Coos County, such as earthquakes, landslides, and floods, and people only have so much attention and energy to devote to different concerns. One way to help residents dedicate resources to mitigating wildfire risk is to focus on co-benefits of fire mitigation work, such as low-flammability plants growing slower and

requiring less pruning, flame-resistant material lasting longer and requiring less maintenance, and proper insulation of windows and attics reducing heating costs. It can also help to focus on lower-effort and lower-cost actions such as removing debris from gutters and creating a 5-foot buffer devoid of flammable material around structures. Coos County Emergency Management and partners can also capitalize on public interest when fires do start in and around Coos County, such as the 2025 Moon Complex Fire, to spread messages about wildfire risk and emergency preparedness.

3.f. Special Considerations for Vulnerable Populations (SVI)

Social factors influence how an individual or a community may be impacted in the event of wildfire. This so-called social vulnerability is due to a lack of access to resources. The resources that are lacking can include infrastructure, social support, health, and financial means (Cutter et al., 2003). While Coos County may be well prepared for wildfire after engaging in this CWPP planning process, there is potential for some communities to fall through the cracks or struggle to engage in necessary mitigation and preparation work which makes them more at risk in the event of a fire.

Poverty, racial and ethnic discrimination, age, limited English, and physical ability are frequently factors that are associated with social stratification and result in resource inequity (Crowley, 2020; Cutter et al., 2003; Davies et al., 2018; Emrich et al., 2020; Hewitt, 2013; Ojerio et al., 2008). The US Forest Service, in its Wildfire Risk to Communities online mapping tool (http://wildfirerisk.org) identifies six "vulnerable populations" categories or "Indicators" outlined for Coos County, thus, it is important to consider how to ensure that all community members can participate in the wildfire preparedness actions outlined in this CWPP. An example is how the large homeless population in Coos County provides a direct link to a vulnerable population where trust can be built around wildfire education and perhaps sharing safe warming tools vs. the traditional open fire.

Coos County offers a wide range of options and services designed to support communities. Some examples include NeighborWorks Umpqua who provides housing support and community development services and Oregon Health Authority – Office of Community Health and Engagement (OCHE) which connects Hispanic residents with culturally responsive health coverage assistance and social services. You can explore a full directory of services through Coos County's Circle of Support resource guide, or browse listings on The Help List for Coos County.

Most of the effort to gather stakeholder insights and actions for this CWPP has been focused on including the technically informed, the emergency responders, and the wildfire mitigation practitioners – i.e., people and agencies who would be carrying out most of the proposed projects. This CWPP made additional efforts to gather views, and to inform, people across boundaries, which may be geographical, socio-economic, and preferred media type. This document started with public meetings and included a website presence, social media posts, inter-agency contacts, and a widely distributed and widely shared email invitation to participate. Additionally, a public Community Wildfire Preparedness survey was available to residents for one month of time. (10).

That said, to truly engage socially vulnerable populations areas of vulnerability must first be identified. In Oregon, Smoke Sensitive Receptor Areas (SSRAs) are areas designated by the Oregon Board of Forestry, in consultation with the Department of Environmental Quality (DEQ), that require the *highest level of protection* from smoke due to, a history of smoke incidents, high population density, and special legal visibility protections (e.g., scenic areas). The most prominent SSRA is the Willamette Valley, which includes parts of Lane, Marion, Linn, and Benton counties. Other SSRAs are typically located in more densely populated or visibility-sensitive regions, such as near the Columbia River Gorge (Oregon State, 2025). See the 2024/2025 Oregon Department of Forestry Smoke Management Rules – Statewide Communications Framework for a description of the benefits of prescribed fire, resources for up-to-date information on smoke impacts, and recommendations to reduce smoke exposure. You can also reach out to Coos Health and Wellness for specific questions related to health issues in the community of Coos County..

Given the Census data available, some vulnerabilities regarding wildfire might include people with disabilities, populations living in manufactured homes, people with minimal access to alternate routes for evacuation, people experiencing spotty cell service which limits alert system effectiveness, populations that are visiting or in the many campsites and resorts which are hard to support during a crisis, people of color (and/or speaking a language other than English), and people in poverty. One of the more precise indicators is for people with disabilities – which is a population presumably at greater risk in a wildfire. For example, this population may have greater barriers to implementing mitigation measures (e.g., removing flammable brush in the home ignition zone), or challenges in heeding evacuation notices due to lack of cell service or not being signed up for the

emergency reverse 911 system, Everbridge. See **Figure 3.f.1** below for more details about vulnerable population specifics found in Coos County, Oregon.

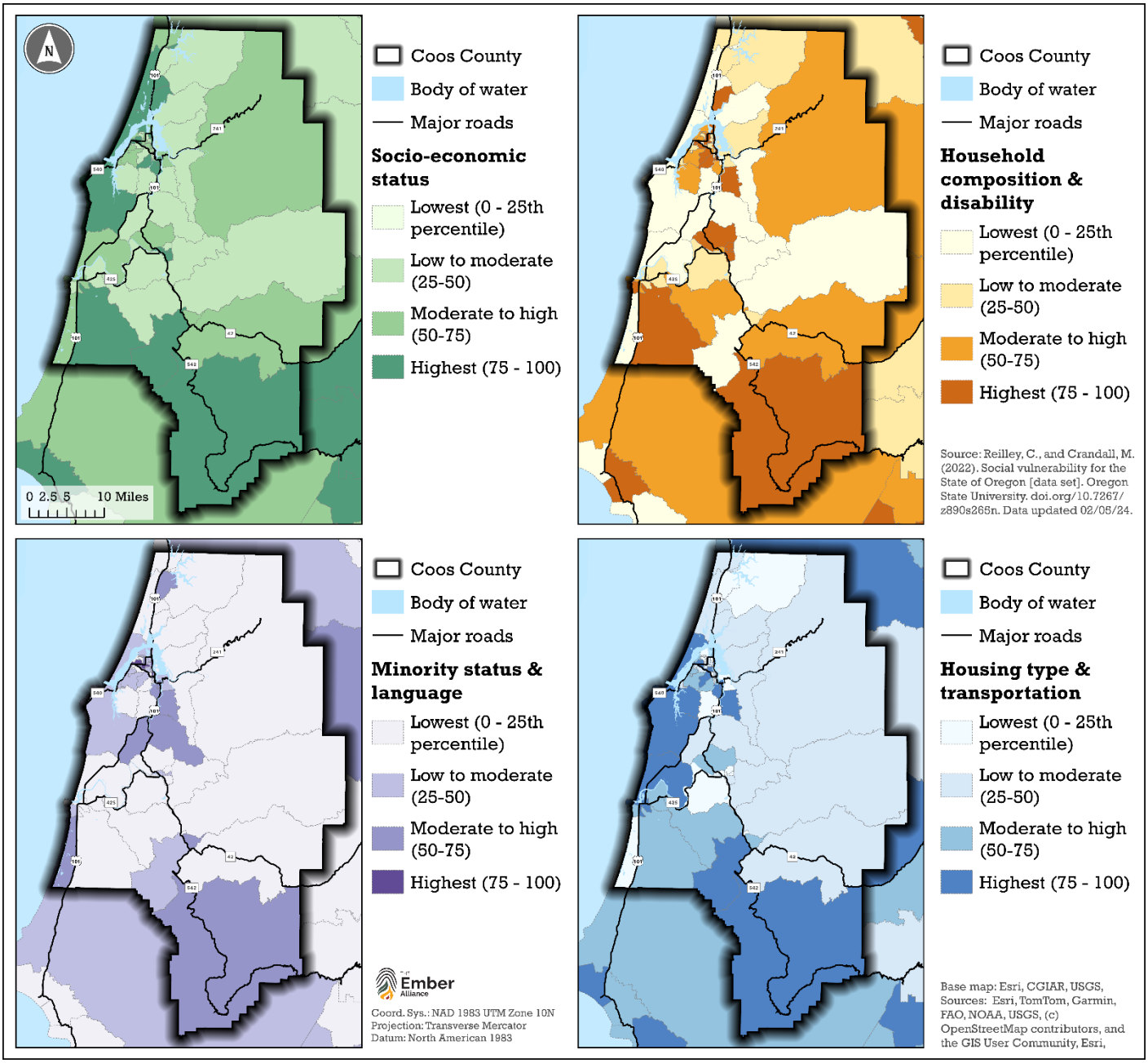


Figure 3.f.1 *Social vulnerability index for Coos County. Categories are broken down by socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation. Maps show that the most vulnerable populations are in southern Coos County and along the western coast. Being higher on a percentile means that there are more vulnerable populations in that area compared to the rest of the state. Source: Social Vulnerability for the state of Oregon [data set], Oregon State University, Esri, TomTom, NOAA, USGS, doi.org/10.7267/z890s265n. (data updated2/5/2024), Reilley C. & Crandall M.(2022), Garmin, FAO, OpenStreetMap contributors, and the GIS User Community.*

Engaging these populations of Coos County may require a sustained effort and reaching out in different ways to meet people where they are, which can include:

- Continuing to diversify the media channels used to disseminate information, to include social media and physical flyers posted in prominent places and using plain language.
- Engaging with the small number of agencies that serve socially vulnerable people locally to help with how-to and informative messages and to provide cost-share resources (reduced cost work crews to help with defensible space, e.g.), as appropriate and available in the future.
- **Translating this document and other community outreach material into Spanish and specifically sharing with the Latino population via local contacts and agencies.**

Pre-fire

Before a fire, it is important to ensure that preparation and potential evacuation communication materials are available in other languages spoken in Coos County. Sole use of English in materials makes it difficult for people with lower proficiency in English to understand. This includes children, people with low literacy, and people who primarily speak other languages. Materials that use images and diagrams rather than words can make sure the broadest audience can understand any materials that Coos County disseminate about wildfire. This resource should specifically be made available to Spanish-speaking residents within Coos County.

Another major barrier is the ability to do the work recommended in this plan. Populations that may be impacted by this include those in lower income brackets who don't have the resources to harden their homes (i.e., by replacing their roofs, siding, and decks with ignition-resistant construction materials), those who rent their homes and cannot make modifications, and those with physical disabilities or impairments that keep them from doing the physical labor often involved in preparation and mitigation actions themselves. By establishing a framework for wildfire mitigation, a CWPP enables the county and its community partners, including local businesses and organizations, to pursue grant funding that supports proactive fire prevention efforts. This not only reduces the risk of wildfire damage but also helps protect vulnerable populations, preserve local infrastructure, and promote long-term economic resilience through collaboration.

To truly reduce the economic barrier at a community level, community leaders must design programs that are accessible for all income brackets. For example, providing mitigation services such as a community chipping program that is free for residents who fall within lower income brackets can encourage those residents to mitigate their properties when they may have otherwise found it inaccessible. Similarly, volunteer days can help those who are not physically able to engage in pre-fire protection of their home by connecting physically able community members with them to help do home hardening work.

Post-fire

Following a fire, households are often solely responsible for their own recovery. While challenging for everyone, this is a particular issue for those without equal access to the social aid that is available like FEMA recovery funds, information on the internet, and claims for insurance (Laska and Morrow, 2006; Méndez et al., 2020). Groups impacted by this can include older adults, undocumented folks, and those who speak English as a second language or not at all.

While planning for post-fire is less of a focus of this CWPP, (residents in Oregon are used to flooding and tsunami preparedness), it is worth mentioning that community ties are as important after a fire as they are in trying to reduce the impact of potential fire. Communities that consider who will need the most assistance after a fire ahead of time are better able to get those folks the help they need quickly.

3.g. Funding Opportunities

There are many funding opportunities from local, state, and federal agencies as well as non-profits to assist in forest health and wildfire mitigation projects. These funds can increase capacity but cannot cover all the costs of fire mitigation needed within the valley. Residents and partners must put forth funds and time to complete this work.

Opportunities from Local and State Agencies in Oregon

- **Coos Fire Patrol Assessment** The Oregon Department of Forestry provides wildland fire protection on private, county and state-owned forest and rangelands within their Fire Protection District Boundaries. This fire protection service is funded by a combination of an assessment on lands within the Fire Protection District and the General Funds for the State of Oregon. The landowner contribution is termed the *Fire Patrol Assessment.* Currently, the General Fund and the landowner's assessment each contribute approximately 50% of the funding at the district level to help provide fire protection and emergency response (CFPA, 2025).
- **Environmental Quality Incentives Program (EQIP)** from the Natural Resources Conservation Service can support private landowners and Tribes conduct forest management, prescribed burning, or prescribed grazing to reduce fire risk**.** Gorse wildfire hazard mitigation funding from NRCS for all of Coos County can be found as a subdivision of this program as well.
- **Oregon Department of Forestry** provides a link to updated funding sources to help residents, agencies, and other partners find funding for natural resource project.
- **Oregon State Fire Marshall (OSFM) Wildfire Investment Program** is aimed at tackling Oregon's wildfire crisis through a comprehensive approach that includes investments in mitigation and response strategies.
- **Oregon State Weed Board Grant Program** focuses on approaches to manage noxious weeds in Oregon's watersheds, aiming to minimize their impact on natural resources. The Oregon State Weed Board funds projects that enhance fish and wildlife habitats, watershed functions, native salmon populations, and water quality, with a priority on controlling state-listed noxious weeds to improve watershed health.
- **Small Forestland Grant Program** provided through the ODF helps individuals, groups, or federally recognized tribes in Oregon, who own up to 160 acres west of the crest of the Cascade Range or up to 640 acres east of the crest of the Cascade Range, helps aims to help small forest owners reduce wildfire risks and enhance landscape resilience. Myrtle and Coos Bay were able to purchase tenders through this grant prior to 2025.
- **The Joint Chief's Landscape Restoration Partnership** is a collaborative initiative designed to work with agricultural producers, forest landowners, tribes, and public land managers on large-scale conservation and restoration projects like targeted forestry management practices like hazardous fuel treatments, firebreaks, and reforestation, tailored to address specific local challenges.

Capacity for Fire Protection Districts

- **Assistance to Firefighters Grants Program** through the U.S. Fire Administration includes grants and general information on financial assistance for fire departments and first responders.
- **Staffing for Adequate Fire and Emergency Response Grants (SAFER)** from FEMA directly fund fire departments and volunteer firefighter organizations to help increase their capacity.
- **Fire Prevention and Safety (FP&S) Grants** offers support to projects that enhance the safety of the public and firefighters who may be exposed to fire and related hazards. The primary goal is to target high-risk populations and mitigate high incidences of death and injury.

Funding from Federal Agencies

- **Building Resilient Infrastructure and Communities (BRIC) grant program** supports states, local communities, Tribes, and territories as they undertake large-sale projects to reduce or eliminate risk and damage from future natural hazards. Homeowners, business operators, and non-profit organizations cannot apply directly to FEMA, but they can be included in sub-applications submitted by an eligible sub-applicant (local governments, Tribal governments, and state agencies).
- **Community Wildfire Assistance Program** from the Bureau of Land Management supports activities such as hazardous fuels reduction, thinning, chipping, outreach, and education on non-federal lands.
- **Community Wildfire Defense Grants (CWDGs)** are funded annually through the National Forest Service and help communities take action on implementation projects from their local CWPP.
- **Emergency Forest Restoration Program (EFRP)** helps owners of private forests (non-industrial) to restore forests that have been damaged by natural disasters. Eligible practices may include debris removal, such as down or damaged trees, site preparation, planting materials, and labor to replant forest stand, restoration of forestland roads, fire lanes, fuel breaks, or erosion-control structures, fencing, tree shelters, and wildlife enhancement.
- **Emergency Watershed Protection Program (EWP)** includes cities, counties, towns, conservation districts, or any federally recognized Native American Tribe or Tribal organization and offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by fires and other natural disasters that could impair a watershed.
- **Fire Management Assistance Grant** from FEMA can support states, local and Tribal governments to mitigate, manage, and control fires on privately or publicly owned forests or grasslands, which threaten destruction that would constitute a major.
- **Firewise Communities** helps with community cleanup days, awareness events, and other cooperative activities can often be successfully accomplished through partnerships among neighbors, local businesses, and local fire departments at little or no cost. The kind of help will depend on who you are, where you are, and what you want to do.
- **Hazard Mitigation Assistance Grants Program (HMGP)** provides funding to state, local, Tribal, and territorial governments so they can rebuild in a way that reduces, or mitigates, future disaster losses in their communities. This grant funding is available after a presidentially declared disaster.
- **Hazard Mitigation Grants Program (HMGP)**-Post Fire allows states, federally recognized tribes, and territories to apply for assistance to help implement hazard mitigation measures following a wildfire.
- **Tribal Environmental General Assistance Program** provides funding to assist tribes in planning, developing, establishing, and maintaining the capacity to implement federal environmental programs administered by the EPA and to assist in implementation of tribal solid and hazardous waste programs.

Opportunities from Non-Governmental Organizations

- For Tribal Governments in the Pacific North West, the **Seeding Justice Tribal Fund** partners participating Tribes with Seeding Justice, who manages funds, handles administrative tasks, and acknowledges donations for an investment in the Tribes who have inhabited our traditional ctvlus for generations. It offers non-Indigenous community members a chance to: 1) Pay reparations, 2) Pay a land tax, and 3) Make land acknowledgements meaningful and actionable. Examples include: 1) Chúush Fund for the Confederated Tribes of Warm Springs and 2) Ambo Fund for the Klamath Tribes.
- **Innovative Finance for National Forests Grant** looks to bring in non-USFS funds to increase forest resilience. There are three main topics for funding: wildfire resilience and recovery, sustainable recreation access and infrastructure, and watershed health.
- The **Matching Awards Program** through the National Forest Foundation looks to provide funds for direct on-the-ground projects benefitting America's National Forests and grasslands by pairing federal funds

provided through a cooperative agreement with the USFS with non-federal dollars raised by award recipients.

- **State Farm Good Neighbor Citizenship Grant** provides funding directed specifically at home safety and fire prevention, disaster preparedness, and disaster recovery.
- **The Urban Land Institute (ULI)**allows for municipal, county, state or federal government entities, nonprofit organizations, and educational institutions to apply for Community Action Grants that could be used for Firewise Communities activities.
- **U.S. Endowment for Forestry and Communities** serves as one of nation's largest public charity helping to keep our working forests working and ensuring their bounty for current and future generations. By working collaboratively with partners in the public and private sectors on projects that include technical and financial assistance for forest health, restoration, and carbon crediting.

4. Implementation Recommendations for Fuel Treatments and Ecological Restoration

4.a. Fuel Treatments and Ecological Restoration

This CWPP covers fuel treatments in the extended zone, stand-level fuel treatments, and roadside fuel treatments, each with their own objectives and benefits. Recommendations for the extended zone are covered in **Section 3.a.**

Fuel Treatment Category	Primary Objectives and Benefits
Defensible space in the extended zone (30-100 feet away from the home)	Reduce surface fuels, reduce tree density, and increase the distance between surface and canopy fuels. Moderate fire behavior near structures and increase their chance of standing strong during a wildfire. Increase safety and access for wildland firefighters. Increase the visibility of structures from roadways to assist wildland firefighters with locating and accessing your home. Coordinate with partners when the extended zone overlaps neighboring properties to address shared wildfire risk. Linked defensible space creates safer conditions and better tactical opportunities for wildland firefighters. Defensible space projects that span ownership boundaries are better candidates for grant funding due to their strategic value.
Stand-level ecological restoration / fuel treatments	Reduce surface fuels, reduce tree density, and increase the distance between surface and canopy fuels. Restore ecological conditions to create more fire-resilient ecosystems. Reduce the likelihood of high-severity wildfires near communities. Create tactical opportunities for fire suppression.
Roadside fuel treatments	Dramatically reduce or eliminate surface and canopy fuels. Reduce the likelihood of non-survivable conditions along roadways during wildfires. Create tactical opportunities for fire suppression. Increase the visibility of structures from roadways to assist wildland firefighters.

Fuel Treatments: Objectives and Benefits

Fuel treatments are a land management tool for reducing wildfire hazards by decreasing the amount and altering the distribution of wildland fuels. Common goals of stand-scale fuel treatments are to reduce the risk of active or passive crown fires and to reduce fire intensity. This is achieved by removing trees, increasing the distance between tree crowns, removing small trees, shrubs, and low branches to increase the distance between surface fuels and tree crowns, and removing downed trees and other dead vegetation (Agee and Skinner, 2005).

Strategically located, high-quality fuel treatments can create tactical options for fire suppression (Jolley, 2018; Plucinski, 2019; Reinhardt et al., 2008). Fuel treatments along trails, ridgelines, and other features can allow firefighters opportunities to use direct or indirect suppression techniques to contain fire spread. During the 2002 Biscuit Fire, which burned nearly 500,000 acres south of Coos County, firefighters benefited from reduced fire

behavior that occurred in numerous fuel treatments encountered by the fire, especially sites that had been thinned and prescribed burned prior to the wildfire (Raymond and Peterson, 2005).

Strategic fuel treatments, in tandem with work by individual residents to mitigate hazards in their home ignition zone, can help protect life and property. The proposed amendments to Northwest Forest Plan encourage the creation of community wildfire protection zones helps to prioritize fire management that protects infrastructure and restores historically fire-dependent landscapes (USFS Pacific Planning Service Group, 2025).

During the 2019 Rosland Road Fire, fuel mitigation by the Deschutes National Forest and defensible space creation by residents helped create safe conditions for wildfires and reduced wildfire intensity. The treatments and recommendations that helped protect the Greater La Pine community from the Rosland Road Fire were strategically prioritized in their CWPP (Oregon Living With Fire, 2020).

Land management agencies in and around Coos County are actively reducing wildland fuels (see **Figure 4.b.1** for a map of previous fuel treatments). Based on responses to the CWPP survey for Coos County, many residents are supportive of fuel treatments and are currently engaged in work to mitigate wildfire risk across Coos County:

- 91% of residents support or highly support fuel treatments on public land.
- 86% of residents are supportive of removing trees and vegetation along roads to enhance the safety of evacuation routes.

During the 2019 Rosland Road Fire, a high-intensity wildfire transitioned to a surface fire when it moved from an untreated part of the Deschutes National Forest (left side of road) into a recently treated area (right side of road). Photo credit: U.S. Forest Service. Source: (Oregon Living With Fire, 2020).

Ecological Restoration: Objectives and Benefits

Ecological restoration is the process of assisting the recovery of an ecosystem that has been damaged, degraded, or destroyed (SER, 2004). Many forests in the western United States have been damaged, degraded, or destroyed because of changes to their historical fire regimes following Euro-American colonization.

> "In the most valuable and at-risk watersheds, every dollar invested in forest restoration can provide up to seven dollars of return in the form of benefits and provide a return-on-invest of 600%." (Hjerpe et al. 2024)

Benefits of forest restoration are wide-ranging, including improvement of habitat for some plants and animals, increased water yield, and improved hunting opportunities. Forest restoration can result in numerous avoided costs from wildfires. For example, restoration can reduce wildfire severity and reduce the cost of fire suppression, the cost of rehabilitating water infrastructure after post-fire erosion, and the cost of rebuilding homes. Research suggests that "In the most valuable and at-risk watersheds, every dollar invested in forest restoration can provide up to seven dollars of return in the form of benefits and provide a return-on-invest of 600%" (Hjerpe et al., 2024).

Fuel treatments and ecological restoration are not synonymous. In some cases, fuel treatments such as such as prescribed burns, mechanical thinning, and hand-pile treatments can restore fire-adapted ecosystems, promote native vegetation, and reduce wildfire risk near communities (Bureau of Land Management, n.d.). Restoration treatments in dry-mixed conifer and ponderosa pine forests tend to achieve both fuel treatment and ecological restoration objectives. In contrast, a treatment that creates a forest with widely, evenly spaced trees could serve as an effective fuel treatment but would not achieve ecological objectives in some forest types.

Culvert replacement on the Coquille-Fairview Road conducted by Coos County Roads Department in September 2025 will support movement of threatened and endangered fish. Culvert replacement and maintenance can also create more fire-adapted roads that can handle post-fire sedimentation.

The purpose of the Northwest Forest Plan, which is currently being amended, seeks to address threats to threatened and endangered species on federal land while also contributing to social and economic sustainability in California, Washington, and Oregon. The goal is to balance commercial timber harvesting and ecological function, while also accounting for impacts of land management on fire risk. The amendment specifically addresses fire resilience by encouraging strategic thinning and prescribed burning, promote restoration of fire resilience and natural fire regimes in dry forest ecosystems, and encourage adaptive management to promote drought- and fire-resilient species (USFS Pacific Planning Service Group, 2025).

The Bureau of Land Management's (BLM) ecological restoration initiatives in Coos County demonstrate a comprehensive approach to forest health, watershed resilience, and fire-resilient forests, showing alignment with the priorities of the Northwest Forest Plan. Restoration efforts focus on thinning and prescribed burns to reduce hazardous fuels while also help reestablishing fire-adapted ecosystems. Restoration also includes mitigation of invasive plants like Scotch broom while reforesting with native species to enhance biodiversity (Bureau of Land Management, 2016).

Ecological restoration by the BLM also includes activities not directly tied to fuel treatments, but some of these projects indirectly promote fire-adapted communities. Infrastructure improvements, including road decommissioning and culvert replacements, help to mitigate erosion, and improve aquatic ecosystems. Culvert

replacements can create more fire-adapted road systems by handling an increased potential for post-fire erosion. The proposed Woodward Creek Watershed Improvement project by the BLM seeks to restore riparian and aquatic habitat in the Hudson Creek watershed in Coos County, including through road decommissioning and culvert replacement (Bureau of Land Management, 2025). This type of project can make riparian ecosystems more resilient to wildfire and post-fire erosion. Projects that restore riparian complexity and reconnect floodplains can increase moisture retention in riparian areas, thereby reducing the flammability of streamside vegetation and serving as a natural fuel break.

Other restoration efforts by the Coos Bay District of the BLM include collaborative planning with local partners and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI) to align ecological goals with cultural values. These efforts aim to accelerate habitat development and strengthen protections for the marbled murrelet and the northern spotted owl (Bureau of Land Management, 2023).

Douglas-fir forest in a late seral reserve managed by the Bureau of Land Management that was thinned and limbed to create conditions conducive to the spread of wildfire in fire-adapted ecosystems. The BLM often returns to thinned sites to conduct prescribed broadcast burns. Photo credit: The Ember Alliance.

Commercial Timber Management: Objectives and Benefits

Commercial logging within Oregon focuses on clearcutting large trees, usually with large machinery, that can then be sold for a profit. Areas that have been clearcut are then replanted with trees for future harvests. Oregon law require that trees be left as buffers alongside streams and rivers to protect the ecosystem, water, and fish (Oregon Forest Resources Institute, 2025).

Logging should not be confused with fuel treatments. Management of timberland can impact fire behavior by altering forest structure, but commercial timber management is not designed to be a fuel treatment and does not qualify as ecological restoration. Clearcutting removes all trees in an area at once, and while this can mimic high-intensity fire behavior in some ecosystems, the purpose is to create conditions conducive to replanting and regrowing trees. Timber management can include alternative methods to clearcutting such as variable-density thinning and group selection.

Clearcutting can break up the continuity of dense forests and moderate fire behavior, but it depends on time since treatment (**Figure 2.f.5**). The potential for intense wildfire can be lower for 1-10 years after clearcutting and pile burning of slash, and then it increases after vegetation begins to regrow. Fire risk lowers again after about 25 years when trees are taller, begin to lose their lower limbs, and shade the understory, which eliminates growth of grasses, forbs, and shrubs (Lindenmayer et al., 2009; Spies et al., 2018).

Commercial timber management is important to the local economy in Coos County, and 41% of the county is owned by timber industrial landowners. Some portions of BLM land outside of late seral reserves are managed for commercial timber production. It is a challenging task to balance the economic benefits of commercial timber management with negative impacts to wildlife habitat while also creating a more fire-resilient landscape that protects communities from wildfire, which was the impetus for the Northwest Forest Plan (Spies et al., 2018).

Clearcutting creates a mosaic of forest conditions on the landscape, and the potential intensity of wildfire changes with time since treatment. Fire intensity can be lower for 1-10 years after harvest once surface fuels have been burned, increase as vegetation begins to regrow, and then decrease again after about 25 years when trees are taller, begin to lower their limbs, and shade the understory. Photo credit: The Ember Alliance.

Methods Used to Conduct Fuel Treatments and Restore Ecosystems

Common methods used to conduct fuel treatments include thinning (removing trees manually or mechanically), chipping or masticating trees and shrubs, pruning limbs, broadcast prescribed burning, mowing, and grazing. Thinning and burning treatments tend to achieve fuel reduction objectives and modify fire behavior to a greater extent than thinning alone (Davis et al., 2024; Fulé et al., 2012; Prichard et al., 2020).

Thinning

Trees can be removed manually or mechanically, with the most suitable method depending on slope, road access, cost, and potential damage to soil. Mechanical fuels reduction may be used either as a stand-alone treatment or to "step down" fuels before prescribed burning (Bennett, M., & Fitzgerald, S., 2008). Thinning operations often increase surface fuel loads and can fail to achieve fire mitigation objectives if fuels created by the harvest activities (also known as slash) are not addressed (Agee and Skinner, 2005).

A feller-buncher is a common piece of equipment used for mechanical treatments. Photo credit: Oregon Department of Forestry.

The 2002 Biscuit Fire on the Rogue Siskiyou National Forest in Southwestern Oregon provided a great opportunity to understand the impacts of mechanical thinning on fire behavior during an intense wildfire. Researchers found that the number of trees killed during the Biscuit Fire was highest in areas that were thinned only and lowest in areas that were thinned and then broadcast burned. The slash left over after thinning treatments likely explains the higher mortality in area that were thinned only, and it underscores the importance of treating surface fuels (Raymond and Peterson, 2005). See **Approaches to Slash Management** for options to mitigate surface fuel loads.

Other Mechanical Treatments

Mastication, griding, crushing, and chipping involve the use of equipment to break up woody fuel, including small trees, into small pieces and trim the height of grasses and forbs. The main goal is to reduce ladder fuels by removing limbs, small trees, and shrubs to create a gap created between surface fuels and crown fuels, thus reducing the potential for fire to spread into treetops (Kreye et al., 2014).

Mastication involves using specialized machines like a tow-behind chipper or a hydro-ax to grind standing saplings and shrubs and cut slash into medium-sized chips. Slashbusters use a rotating "head" of metal teeth or sawblades to break up woody debris. Chipping involves processing slash through a mechanical chipper to break material into small chips or shreds. The City of North Bend has recently purchased masticating equipment to treat some of their properties.

Mowing is primarily used to reduce flashy fuels in the immediate and intermediate home ignition zones and along roadways, railways, and powerlines. Mowing is commonly employed as a first step in gorse mitigation to reduce the height of gorse and make it easier to treat with chemical methods. **Transporting mowed gorse by vehicle is illegal due to the risk of spreading seeds during transit** (Oregon Department of Agriculture, Chapter 603-052-1200). Instead, gorse should be burned on-site immediately after mowing.

Broadcast Prescribed Burning

Broadcast prescribed burning is often the most effective method to mitigate wildfire risk and create healthy conditions in a variety of grassland, shrubland, and forest ecosystems (Davis et al., 2024; Paysen et al., 2000; Stephens et al., 2009). This method has unique impacts on vegetation, soils, and wildlife habitat that cannot be

replicated by mechanical treatments alone (McIver et al., 2013). Prescribed burning mimics naturally occurring wildfire, can treat hundreds of acres at a time, removes surface fuel, and is relatively cost-effective (Hartsough et al., 2008; Hunter et al., 2007). Prescribed burns can reduce property damage during wildfires because they are so effective at reducing fuel loads (Loomis et al., 2019).

Broadcast prescribed burning is challenging in the WUI due to diverse fuel types, proximity to homes, risk of visibility impairments on roads from smoke, health impacts of smoke, and political and social concerns. However, with proper planning and implementation, qualified firefighters can safely conduct prescribed burns, even in the WUI (Hunter et al., 2007). Life safety is always a top consideration when developing and conducting prescribed burns. Less than 1% of prescribed burns escape containment lines, and most of these are rapidly suppressed (Weir et al., 2019).

It is understandable for community leadership and residents to have some reservations about broadcast burning and pile burning; however, 88% of residents who responded to the CWPP survey support or highly support either broadcast prescribed burning or pile burning to mitigate wildfire risk (see **Appendix C**).

Broadcast prescribed fires are carefully planned and managed under controlled conditions to reduce the buildup of flammable material, restore or maintain natural ecosystems, and improve wildlife habitat. Photo credit: Kyle Sullivan, Bureau of Land Management. Taken during as 2023 prescribed burn on the BLM Medford District in southwestern Oregon.

Cultural Burning

Indigenous peoples have practiced cultural burning for millennia for various reasons, including to maintain travel corridors, improve wildlife habitat, improve water quality and quantity, control pests, steward cultural plants, and conduct spiritual, religious, or community ceremonies. Indigenous cultural burning practices are distinguished from broadcast prescribed burning through their connection to Tribal or Traditional Indigenous laws, objectives, outcomes, and the right to burn (Clark et al., 2024). Cultural burning is identified as an important form of stewardship in the 2025 Coquille Resilience Management Plan (Coquille Indian Tribe, 2025), stewardship agreement between the CTCLUSI and U.S. Forest Service (CTCLUSI and USFS, 2024), and the 2023 National Cohesive Wildland Fire Management Strategy Addendum Update.

Cultural burning by Tribes may still occur today, but in much smaller and private parts of their lands. The document Good Fire II outlines benefits of cultural burning, barriers that inhibit Tribes from engaging in this important cultural and land stewardship activity, and recommendations to support this practice.

Grazing

Grazing animals can be used to reduce surface fuels and trim the height of grasses, forbs, and shrubs, depending on the species of livestock and species of plants. For example, In Coos County, goats can be used to mitigate Armenian blackberries. Grazing can decrease flame length by reducing the height and volume of fine flashy fuels (Harper, 2011).

Goats will browse woody vegetation like blackberry and poison oak. Photo credit: John O'Connor, Oregon Department of Forestry.

Approaches to Slash Management

Forest management operations often increase surface fuel loads and can fail to achieve fire mitigation objectives if fuels created by the harvest activities (also known as slash) are not addressed (Agee and Skinner, 2005). Slash can include small trees, limbs, bark, and treetops. Slash management is a critical step in the forest management process. It is unwise, ineffective, and even dangerous to conduct poor-quality fuel treatments that fail to reduce canopy fuels, result in increased surface fuel loads, and do not receive maintenance treatments. Such treatments can lead to a false sense of security among residents and fire suppression personnel (Dennis, 2005), and they divert limited funds away from more effective, strategic projects.

Methods for managing slash come with different benefits and challenges (**Table 4.a.1**). For example, limbing trees and mastication do not remove surface fuels from the site, they only rearrange them. It can take a decade or more for slash to decompose to a point where it no longer poses a significant fire hazard. Broadcast prescribed burning and pile burning are more effective at removing surface fuels, but they require extensive planning and expertise to conduct properly (Bennett, M., & Fitzgerald, S., 2008).

***Table 4.a.1**. Many methods are available to remove slash created by forest thinning, each with their own benefits and challenges.*

Method	Removes surface fuel from site	Restores ecosystem functions	Retains nutrients on the site	Expertise required to conduct	Effort to conduct	Relative cost / acre	Time to plan and conduct
Broadcast prescribed burning	✓	✓	✓	Very high	Very high	$$$	Months to years
Pile burning on site	✓		✓	Moderate	Moderate to high	$$	Weeks to months
Community slash pile	✓			Low to moderate	Moderate	$$	Ongoing
Mastication, grinding, slashbusting, and chipping	(✓)		✓	High	Moderate to high	$$$	Weeks to months
Mycelium injections	✓	✓	✓	Moderate	Low to moderate	$	Months to years

Note: Mastication, grinding, slashbusting, and chipping only remove surface fuel from the site if material is hauled away after treatment.

Broadcast Prescribed Burning

What is broadcast prescribed burning? Broadcast prescribed burns originate from a planned ignition in accordance with applicable laws, policies, and regulations to meet specific objectives (NWCG, 2018b). As described above, broadcast prescribed burning is often the most effective method to reduce surface, ladder, and canopy fuel loads.

What are benefits of broadcast prescribed burning? Broadcast prescribed burning consumes surface fuels and can restore conditions in ecosystems that historically experienced regular fires. Prescribed burning can reduce the risk of high-severity wildfires, it is a relatively cost-effective treatment, and it can be conducted safely even near the WUI with proper planning, qualifications, and wind conditions (Hartsough et al., 2008; Loomis et al., 2019; McIver et al., 2013).

How is broadcast prescribed burning conducted? Broadcast burning can be safely and successfully conducted with proper planning and implementation. Broadcast burning is carefully regulated in Coos County by the Coos Forest Protective Association (CFPA):

- CFPA enforces fire safety regulations and burn bans during fire season. They do not issue burn permits during fire season, and all burning must comply with their safety guidelines.
- Residential burning regulations for smaller burns within city limits are handled by local fire departments, but larger land clearing and industrial burns (like broadcast burns) fall under state and regional jurisdiction (CFPA, 2025).
- Oregon DEQ regulates smoke management and air quality impacts from non-industrial open burning and broadcast burns must be planned to minimize smoke exposure to sensitive areas of Coos County (Department of Environmental Quality, n.d.).

In 2024, Governor Kotek signed House Bill 4016 establishing the pilot Prescribed Fire Liability Program, which aims to increase use of prescribed fire and cultural burning by providing liability coverage for burns enrolled in

the program. This legislation authorizes claims covering certain losses arising from escaped prescribed fires and cultural burns.

Within Oregon, the ODF has a Certified Burn Manager Program, but legislation is needed to make funding permanent. The purpose of the program is to provide training and liability protection to individuals who complete coursework and participate in supervised training burns. More information can be found within the certified-burn-manager-program-brochure.pdf.

What are challenges with broadcast prescribed burning? Challenges with broadcast burning can include public concerns about risk from flames, embers, and smoke. There are often limited opportunities to conduct burns under appropriate weather conditions. See the 2024/2025 Oregon Department of Forestry Smoke Management Rules – Statewide Communications Framework for a description of the benefits of prescribed fire, resources for up-to-date information on smoke impacts, and recommendations to reduce smoke exposure.

Pile Burning

What is pile burning? Pile burning involves piling slash from logging or fuel management activities into manageable piles that are subsequently burned during safe and approved burning conditions (NWCG, 2018b).

Pile burning is different from broadcast burning; the overall complexity of pile burn operations is lower because fire activity is limited to discrete piles, and piles can be burned when weather conditions are less conducive to fire spread.

What are benefits of pile burning? Pile burning can be the best and sometimes only option for slash removal in steep, inaccessible areas. It is cost-effective and requires less equipment than many other approaches to slash management. It is relatively safe when conducted in accordance with local regulations and laws.

Pile burning can be a safe and effective method to consume slash created by thinning operations. Photo credit: Lisa McNee, Bureau of Land Management. Taken during a prescribed fire training in Oregon's Umpqua Basin in 2017.

How is pile burning conducted? In Coos County, CFPA assists landowners and timber companies with pile burning and grazing in the off season. Burning by residents is encouraged, but CFPA has regulations on when, what, and how citizens can burn debris (https://www.coosfpa.net/outdoor-burning-1). Land managers, private landowners, and commercial landowners must comply with Oregon DEQ's open burn regulations, which vary by location and air quality conditions. Check DEQ's interactive map to see if burning is allowed on a given day based on air quality and local restrictions. or small residential pile burns, but you should still notify CFPA or your local fire department to confirm. See tips on the next page from the ODF about outdoor debris burning. The guide is also available online at https://www.oregon.gov/odf/documents/fire/outdoor-debris-burning-safety-tips.pdf.

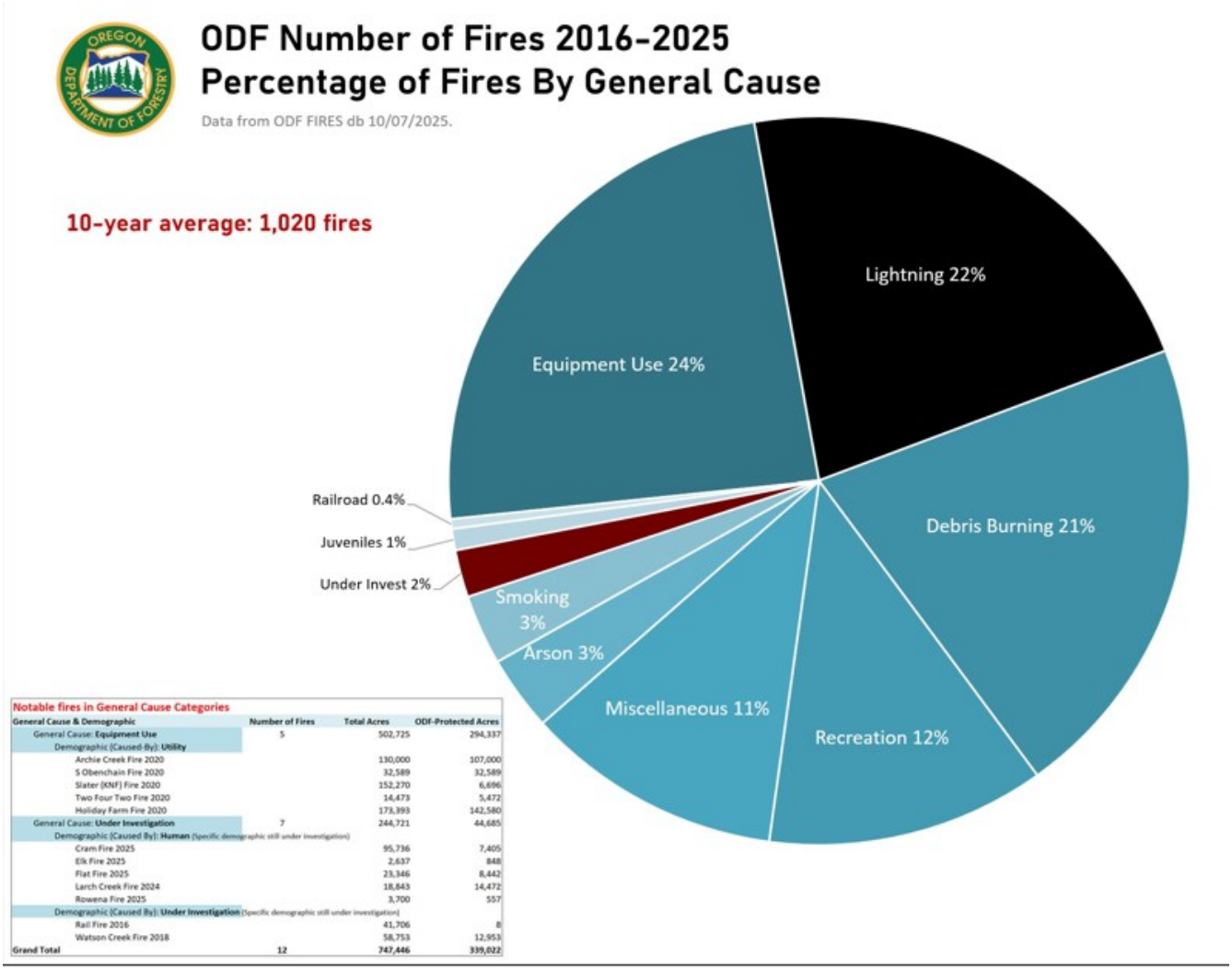
The Oregon Certified Burn Manager Program is a great opportunity for private landowners to receive training and liability protection after completing coursework and supervised training burns. More information can be found within the certified-burn-manager-program-brochure.pdf.

What are challenges with pile burning? Challenges with pile burning can include public concerns about risk from flames, embers, and smoke. Unsafe debris burning is a top cause of unintended fires in Oregon (**Figure 4.a.1**); However, when done correctly, the risk of pile burning is relatively low. Piles are typically burned on days with high fuel moistures and low to moderate wind speeds. Embers from burn piles travel shorter distances than embers from passive and active crown fires because the burning material is closer to the ground (Evans and Wright, 2017).

Intense heat from pile burning can sterilize soils and result in slow recovery of plants. Mitigation measures, such as raking the burnt soil and seeding with native plants, are sometimes warranted after pile burning if the soil was completely sterilized by extreme heat or if invasive species are prevalent in the area (Miller, 2015).

It is critical to properly construct piles either by hand or with machines and to burn them as soon as conditions allow. Unburnt slash piles can become a hazard during wildfires, especially if loose logs catch fire and roll down slopes. Burning older piles is less effective and does not consume as much material because piles become compact and loses fine fuels over time (Wright et al., 2019).

Burn barrels are no longer allowed by CFPA during fire season in Coos County because of the. Burn barrels are allowed outside fire season and can be a safer way to burn household debris because they can reduce health impacts of smoke and the risk of escaped fires.



Notable fires in General Cause Categories

General Cause & Demographic	Number of Fires	Total Acres	ODF-Protected Acres
General Cause: Equipment Use	5	502,725	294,337
Demographic (Caused By): Utility			
Archie Creek Fire 2020		130,000	107,000
S Obenchain Fire 2020		32,589	32,589
Slater (KNF) Fire 2020		152,270	6,696
Two Four Two Fire 2020		14,473	5,472
Holiday Farm Fire 2020		173,393	142,580
General Cause: Under Investigation	7	244,721	44,685
Demographic (Caused By): Human (Specific demographic still under investigation)			
Cram Fire 2025		95,736	7,405
Elk Fire 2025		2,637	848
Flat Fire 2025		23,346	8,442
Larch Creek Fire 2024		18,843	14,472
Rowena Fire 2025		3,700	557
Demographic (Caused By): Under Investigation (Specific demographic still under investigation)			
Rail Fire 2016		41,706	8
Watson Creek Fire 2018		58,753	12,953
Grand Total	12	747,446	339,022

Figure 4.a.1 *Burn barrels are no longer allowed during fire season because these have caused unintentional ignitions in the past.* ***CFPA does not issue burn permits during fire season****. Outside of fire season, permits may not be required. Source: Oregon Department of Forestry.*

Mechanical Treatments

What are mechanical treatments to manage slash? Mastication, grinding, slashbusing, crushing, and chipping are mechanical approaches to slash management involve using specialized machines to break woody fuel into smaller pieces. The size of material that can be broken up and the size of the chips varies depending on equipment. A comparison of slashbusting and grinding, mowing and mastication, and crushing are provided in

Table 4.a.2.

What are benefits of mechanical treatments? Mechanical treatments can rearrange fuels by removing ladder fuels, thereby reducing the risk that fire travels from the surface into treetops. Neighborhood chipping programs are cost-effective ways for communities to gain access to chippers without individuals paying for the unit and service each time they need it.

How are mechanical treatments conducted? For detailed information on chipping and mastication in Oregon, refer to the OSU Extension Service publication "Reducing Hazardous Fuels on Woodland Property: Mechanical Treatments."

What are challenges with mechanical treatments? Unless material is hauled away after treatment, these approaches only rearrange fuel and do not reduce it. It is NOT recommended that chipped material be left near homes. Mechanical treatments often need to be combined with prescribed fire to effectively reduce wildfire risk (Davis et al., 2024; Fulé et al., 2012; Prichard et al., 2020).

Smoldering fires in masticated and chipped fuels can be difficult to suppress, produce abundant smoke, kill tree roots, and lead to spot fires if high winds reignite masticated fuels and blow them across containment lines (Kreye et al., 2014). Additionally, fuels left behind in mastication and chipping treatments are deeper and more compact than natural fuels (Kreye et al., 2014). Thus, they can impede plant regeneration, particularly when the depth of masticated and chipped fuels exceeds 4 inches (Jain et al., 2018).

Forest in southwest Oregon thinned by a slashbuster. Photo credit: Oregon State University.

Table 4.a.2 *Comparison of slashbusting and grinding, mowing and mastication, and crushing as methods for slash management. Cost ranges are from 2008 and represent a minimum cost. Source: (Bennett, M., & Fitzgerald, S., 2008)*

Considerations	Option		
	Slashbusting and grinding	Mowing and mastication	Crushing
Objective and effectiveness	Reduce fuels, particularly ladder fuels. Can be very effective.	Reduce and remove fuels, particularly ladder fuels. Can be very effective.	Not as effective as grinding or mastication.
Other treatment required?	Generally, no. May be followed by prescribed burning, though this seldom is practical on small, private woodlands.	Generally, no. May be followed by prescribed burning, though this is seldom practical on small private woodlands.	May be followed by prescribed burning, though this seldom is practical on small, private woodlands.
Use near home?	Generally, no. Large chunks of wood and sometimes rocks are flung out long distances, a safety hazard. Beyond 100 ft from home, though, this could be practical.	Maybe, with smaller equipment that is less likely to throw material.	No
Use in riparian zone?	No	No	No
Slope	Less than 35%	Less than 35%	Less than 35%
Contract cost range	$250–$600+ per acre	$40–$600+ per acre	$50–$70 per hour
Advantages	• Relatively low cost. • Very effective for some vegetation types such as brushfields. • Treated fuels generally not at risk of beetle infestation, because pieces are small.	• Relatively low cost. • Very effective for some vegetation types • Treated fuels generally not at risk of beetle infestation, because pieces are small.	• Low cost. • Easy to implement.
Disadvantages	• High move-in costs. • Possible soil compaction. • May spread weeds and damage leave trees.	• Possible soil compaction. • May spread weeds and damage leave trees.	• Less effective. • Possible soil compaction. • Not suitable for green vegetation or larger material.

Community Slash Piles

What are community slash piles? Community slash piles are places where residents can bring slash from their property and have it disposed of collectively. Community slash piles are often burned or chipped, eliminating the need for residents to burn or chip their own material.

Where are there community slash piles in Coos County? Slash can be dropped off at Beaver Hill Transfer Site for a fee. The City of Bandon and City of Myrtle Point conduct slash pickups.

What are challenges with community slash piles? It can be challenging for residents to haul material from their properties to the slash pile. Providing a program that will pick up the slash material and bring it to the slash disposal site will reduce barriers for residents to complete mitigation.

The success of community slash piles is dependent on consistent management of the pile. If large slash piles are left in the community, they can pose a fire risk. Community slash piles also come with a cost for management and maintenance, but the cost is spread across all residents and therefore lower than if individual residents were to create and burn their own slash piles.

Hauling material away from the treatment area can also spread insects like mountain pine beetles and emerald ash borer ("ODA : Emerald Ash Borer :Oregon," n.d.). Gorse should **never** be transported offsite because seeds are viable for at least 30 years and transportation allows for easier spread of this noxious weed throughout the county. Instead, cut gorse can be burned on site to destroy seeds and prevent future germination.

Mycelium Injections

What are mycelium injections? Mycelium injections are a method used to help with mushroom cultivation and ecological restoration. Injections introduce spores, or liquid culture, into a sterile substrate (such as wood chips) using a syringe. This method allows the establishment of fungal networks to help with decomposition, nutrient cycling, and improved soil health with greater biodiversity.

As part of a forest restoration pilot project, the Coquille Indian Tribe plans to inoculate forest woodchips before the end of November 2025. The initiative aims to reestablish natural fungal decomposition processes across the forest floor, accelerating the breakdown of woody debris and enhancing ecosystem function.

The Northwest Forest Plan also highlights the ecological importance of fungi, identifying species of special concern that warrant consideration for inoculation efforts throughout the Pacific Northwest (Castellano, Michael A. et al., 2003). These species play critical roles in forest resilience, symbiotic relationships with native vegetation, and the long-term health of forest ecosystems.

An example from the fungi genus Pleurotaceae growing 4 months after injection on a tree stump. Photo credit: The Ember Alliance.

> ***"[Mycelium injections] would decompose the dead wood and provide a food source of edible native mushrooms in the process. The mycelium would also help to rebuild healthy soils as well. At this point it is a pilot project, and if all goes well, we will continue to inoculate areas to reduce the amount of flammable material in the forests while growing native foods."***
>
> ***Cara Monson ~ Tribal Resilience Specialist, Coquille Indian Tribe***

Fuel Treatment Effectiveness

The effectiveness of fuel treatments is influenced by a variety of factors, including the intensity, quality, and extent of treatment, location of treatments, maintenance of treatments, weather conditions and fire behavior, and actions of firefighters (**Figure 4.a.2**). Fuel treatments are more likely to modify wildfire severity and create opportunity for wildland firefighters than they are to stop wildfires. Fuel treatments can reduce wildfire severity by 62-72% compared to untreated areas, and the impacts are greatest when surface fuels are treated with pile burning and/or broadcast prescribed burning after thinning (Davis et al., 2024). The percentage of fuel breaks that have effectively stopped actual wildfires is between 22-47% in forests (Gannon et al., 2023; Syphard et al., 2011). A review of fuel treatment effectiveness found that, "A fuel treatment can only be as effective as the suppression that goes along with it"—less than 1% of wildfires are stopped by a fire break alone and in insolation of suppression activities (McDaniel, 2023; page 3).

Fuel treatments are more effective under moderate fire weather conditions than extreme weather conditions, and most effective when firefighters are present to use the fuel treatment as a control feature (Gannon et al., 2023; Jain et al., 2021; Reinhardt et al., 2008; Syphard et al., 2011; Weise et al., 2023). Uncontrollable factors will always play a role in home loss during extreme wildfires. Minute-to-minute shifts in wind directions, unexpected wind gusts, and extreme fire behavior and growth that overwhelm suppression efforts can result in home loss not explained by mitigation efforts prior to the fire.

Benefits of fuel treatments are not permanent and decrease overtime, with treatment "lifespan" depending on forest type, topography, rates of seedling regeneration (which is often influenced by precipitation), and the number of trees removed during treatments. Many forests require more than one treatment to reduce fuels and restore ecosystem structure. Some areas might require mechanical tree removal followed by prescribed burning, and then a maintenance treatment with tree removal and/or prescribed burning several years later.

Climatic and soil conditions in southwestern Oregon are conducive to rampant regrowth. According to OSU Extension, the effects of thinning and other fuel treatments can be 15 years or less (Bennett et al., 2010). Roadside treatments in southwestern Oregon often need to occur on an annual basis to keep vegetation short enough for safety, visibility, and fire risk reduction.

Gorse management requires multiple treatments to eliminate the plant because of its vigorous sprouting and persistent seedbank. According to the Gorse Action Group, "The key to controlling its [gorse's] spread is to prevent flowering or at least reduce its ability to set seeds. Only by eliminating the seed bank can gorse be contained." Without a commitment to retreating gorse, the plant will continue to thrive.

Fuels along roads and under powerlines need to be removed on an almost annual basis due to vigorous regrowth in southwestern Oregon. Photo credit: The Ember Alliance.

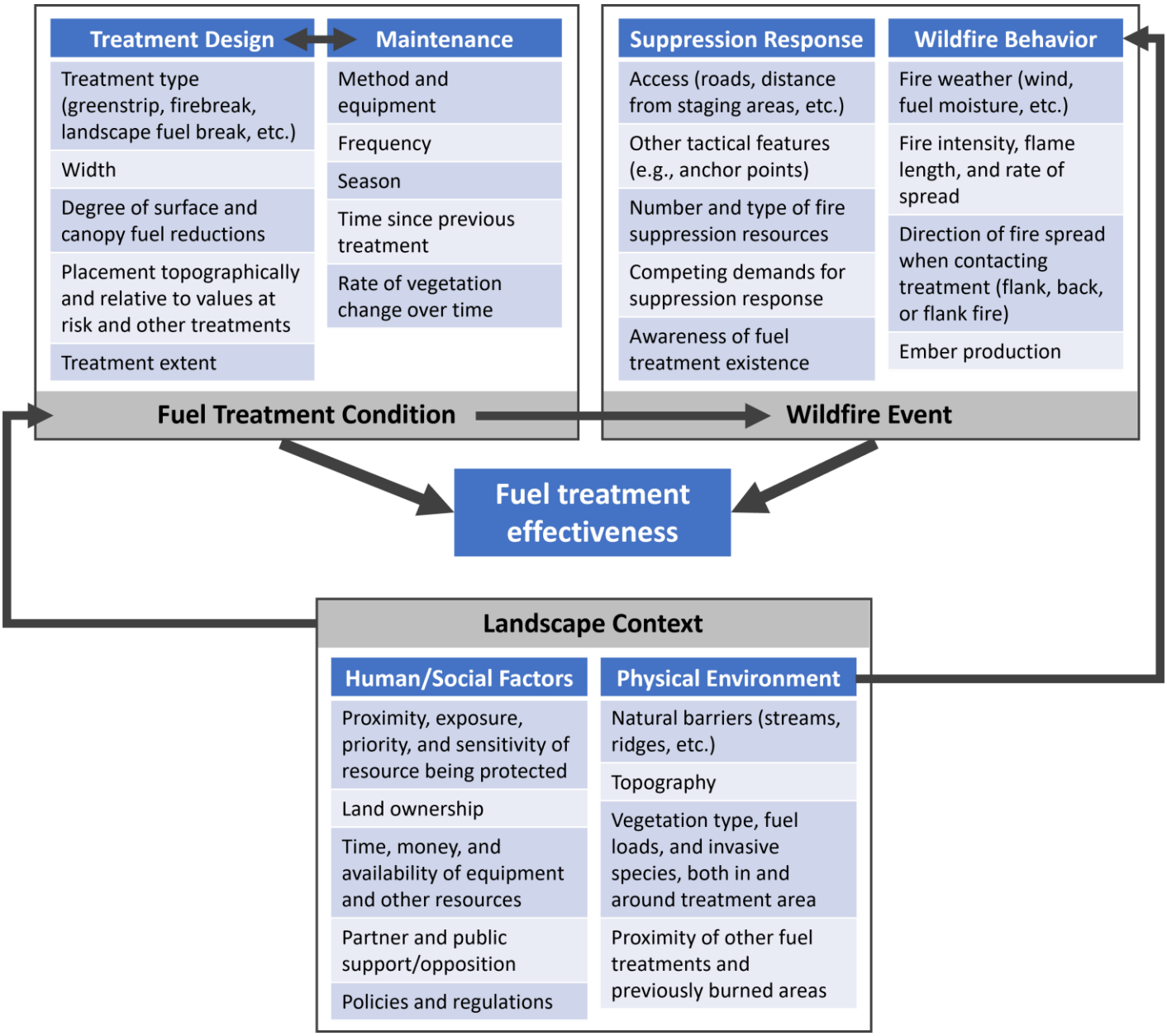


Figure 4.a.2. *The effectiveness of fuel treatments at altering wildfire behavior is influenced by numerous factors related to landscape context, fuel treatment specifications, and conditions during a wildfire event. Figure modified by The Ember Alliance based on (Jain et al., 2021; Trauernicht and Kunz, 2019)*

4.b. Recent Fuel Treatments in Coos County

Public land managers and private residents in and around Coos County have conducted numerous fuel treatments to reduce wildfire risk, and in some cases, to also restore ecosystem health (**Figure 4.b.1**). CFPA assisted almost 60 residents in the Allegany area to mitigate fire risk around their properties. The Gorse Action Group works tirelessly with partners to remove gorse and prevent its spread. Treating gorse can require years of concerted effort to remove existing plants, prevent regrowth, and destroy seeds in the soil. The Oregon State Fire Marshall is funding several wildfire mitigation projects in Coos County, including one in the Byron Creek Area by Tenmile Rural Fire District (see photos below).

The USFS and BLM regularly conduct forest thinning, sometimes followed by pile burning or broadcast prescribed burning. The BLM treated almost 25,000 acres of late seral reserve land in Coos County between 2000-2025, and the U.S. Forest Service treated about 3,400 acres (**Table 4.b.1**). Goals of BLM land management on late seral reserves are to promote the growth of large fire-resilient trees, enhance habitat, and return wildfire to the landscape.

Table 4.b.1. *Fuel treatments conducted by the U.S. Forest Service and Bureau of Land Management between 2000-2025. Only treatments on BLM reserve land were included because treatments on these lands had specific fuel treatment objectives, unlike other lands managed primarily for commercial timber sales. Sources: USFS and BLM.*

Fuel treatment method	Acres treated between 2000-2025	
	U.S. Forest Service	Bureau of Land Management (reserve land only)
Commercial timber sale with fuel treatment objectives	1,966	20,014
Thinning	597	
Pile burning	91	4,853
Rearranging fuel (e.g., removing limbs, masticating fuel)	748	
Broadcast burning or underburning		69
Total acres treated	3,402	24,936

Before (left) and after (right) photos of risk reduction work conducted by Tenmile Rural Fire District in the Byron Creek Area in June 2025, using funding from the Oregon State Fire Marshall. Photo credit: Tenmile Rural Fire Department.

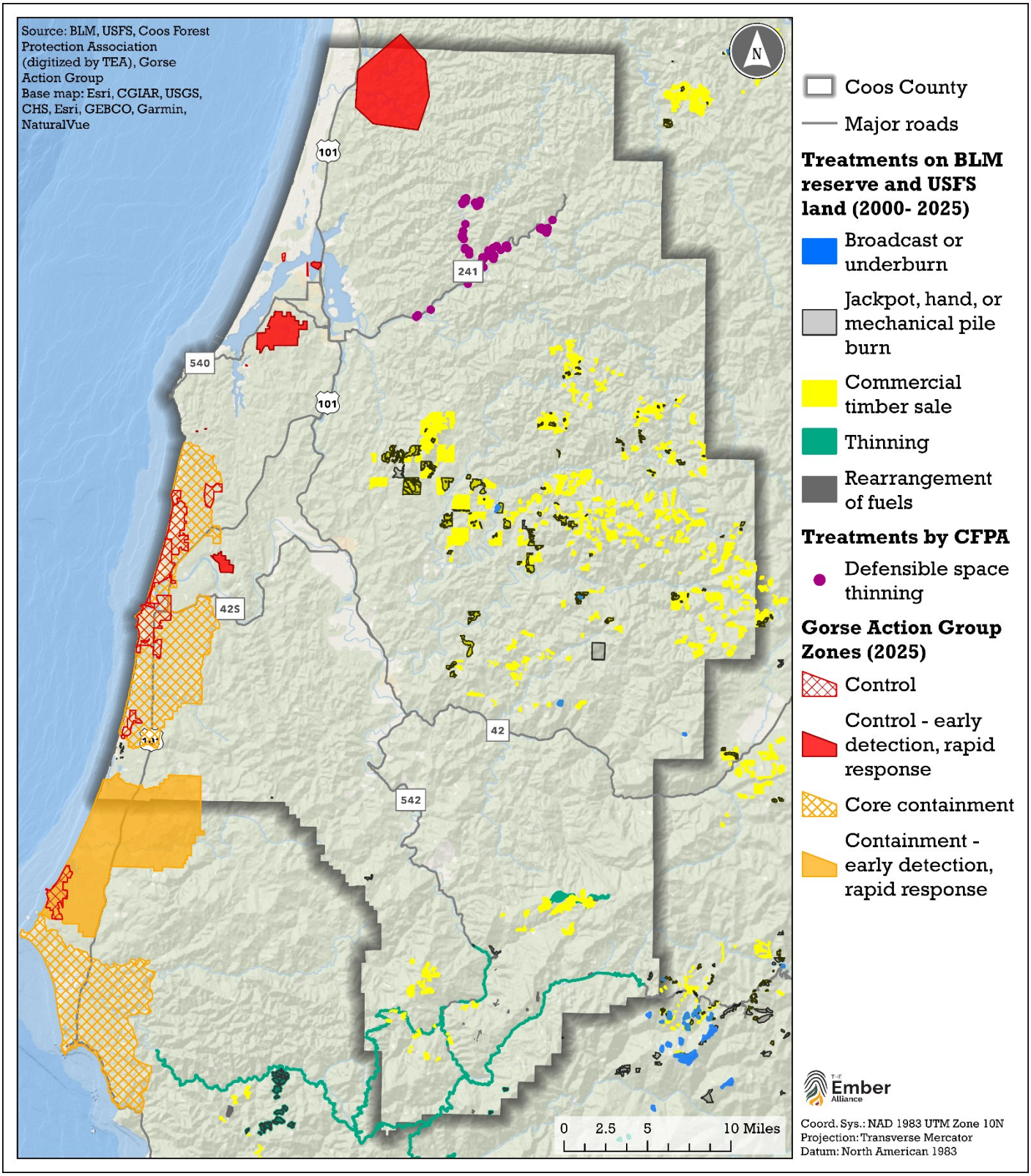


Figure 4.b.1. *Locations of fuel treatments in and around Coos County from 2000 – 2025. Sources: Bureau of Land Management, U.S. Forest Service, Coos Forest Protection Association, and Gorse Action Group.*

4.c. Recommendations for Roadside Fuel Treatments

Strategically located, high-quality fuel treatments along roadways can make conditions safer for residents, firefighters, and other first responders during evacuations, they can create tactical options for fire suppression, and they can enable proactive management such as broadcast prescribed burning (Hersey and Barros, 2022; Jolley, 2018; Plucinski, 2019; Reinhardt et al., 2008) (**Figure 4.c.1**). Reducing fuels along roadways can also reduce the risk of fires starting from vehicles throwing sparks from chains or cigarettes or hot vehicles parking along the roadside. Treatments along roadways require a dramatic reduction of fuels to create safer and survivable conditions. This includes removing most trees adjacent to the roadway, limbing remaining trees, and regularly mowing grass and shrubs (**Figure 4.c.2**).

Important aspects of roadside fuel treatments include:

- Removing limbs overhanging the road to create at least 13.5-feet of vertical clearance to create accessible conditions for fire engines. See **Figure 3.a.3** for a depiction of how to measure limb height.
- Removing trees alongside the road to create at least 20-feet of horizontal clearance to create accessible conditions for fire engines.
- Removing all dead trees that could fall across the road and block traffic.
- Removing shrubs and regeneration that can serve as ladder fuels.
- Mowing tall grasses adjacent to the road to reduce the intensity of wildfire if a fire were to approach the road.
- Removing slash from the site following fuel treatments. Slash left behind can burn with high intensity during a wildfire and make conditions unsafe for residents and firefighters.
- Considering improvements to the road, such as widening the road, road grading, filling potholes, and creating pullovers to increase access and safety for firefighters and residents.
- Establishing or increasing the width of rock aprons along high-use roads to reduce the chance of ignitions from vehicles.
- When appropriate, and when the goal is to create safer conditions for firefighters or evacuees who might be on the road as a fire approaches, removing trees to create at least 10-feet crown spacing between remaining trees within the roadside treatment zone specified in **Table 4.c.1**. See **Figure 3.a.3** for a depiction of how to measure crown spacing.

Leaving untreated slash within roadside fuel treatments is particularly counterproductive. The risk of active crown fire might be lower after a thinning operation, but untreated slash in fuel treatments can burn at high intensities and endanger the lives of residents stuck on roadways during a wildfire. Slash is easier and cheaper to manage along roadways due to access, and roads can serve as highly effective holding features for broadcast prescribed burning.

How wide do treatments need to be? The width of an effective shaded fuel break (distance to the left and right of a road) depends on slope, vegetation present along the road, and the objective of the roadside treatment. Research on effective treatment widths along roadways is limited, and there is an ongoing effort by The Ember Alliance and Rocky Mountain Research Station to provide more science-based guidance for these important treatments. A narrower treatment is reasonable if the goal is to prevent vegetation along the side of the road from catching fire from ignitions caused by cars or trucks, but if the goal is to change wildfire behavior to make conditions safer for firefighters or evacuees who might be on the road as a fire approaches, then wider treatments are necessary—treatments often described as shaded fuel breaks (Bennett et al., 2010).

The width of an effective shaded fuel break on flat ground is about 300 feet in total (150 feet on each side of the road), but the exact width depends on slope (**Table 4.c.1**). Wider treatments are necessary on the downhill side on steeper slopes due to the exacerbating effect of slope on fire intensity when fires travel uphill. The OSU Extension publication on shaded fuel breaks describes treatment widths of 200 feet for dry forests in eastern Oregon and Washington, but they suggest 300 feet widths might be necessary in wetter forests with taller trees

and denser forests (Bennett et al., 2010). Recommendations for treatment width in **Table 4.c.1** come from the Colorado State Forest Service. Even though forest types are quite different between Colorado and southwestern Oregon, there is no specific guidance in Oregon for wet forests (Bennett et al., 2010).

The U.S. Forest Service is enabled to make even wider treatments along roadways. Under the 2021 Infrastructure Investment and Jobs Act, the U.S. Forest Service has special authority to establish fuel breaks with a total width of 1,000-feet in strategic locations, including along roads on Federal land (Pub. L. 117-58, div. D, title VIII, §40806, 135 Stat. 1110, 16 USC 6592b).

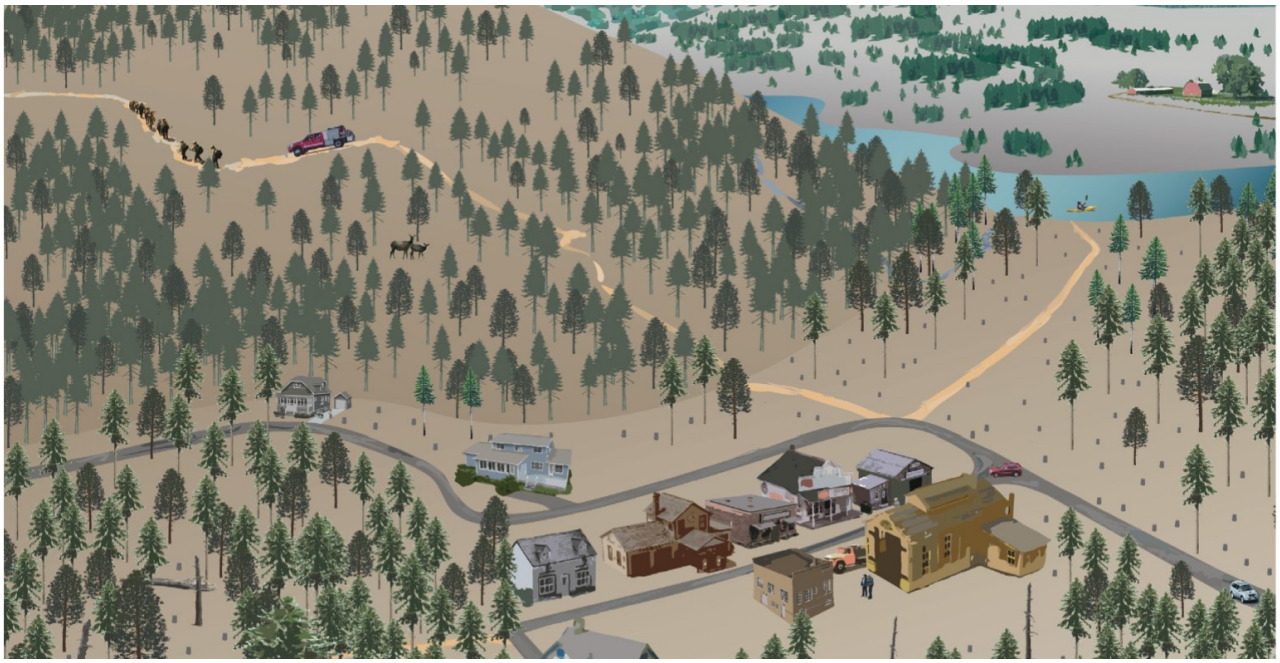


Figure 4.c.1. *Fuel breaks along roadsides can enhance the ability of firefighters to use roads as potential control lines for fire suppression and proactive management of fire on the landscape, and they can make roads safer for residents during evacuations. Source: WA DNR (Hersey and Barros, 2022).*

Figure 4.c.2. *Effective roadside fuel treatments remove enough trees to result in widely space crowns, remove ladder fuels (seedlings, saplings, shrubs, and low limbs), and reduce surface fuels. More dramatic tree removal along roadways can create even safer roadside conditions where appropriate. Photo credit: Santa Lucia Conservancy in California, 2022.*

Table 4.c.1. *Minimum fuel treatment width for shaded fuel breaks on the uphill and downhill from roads depends on the slope along the roadway. Source: (Dennis, 2005) based on suggestion Oregon State University Extension that treatments in wetter forests of southwestern Oregon should be close to 300 feet wide (Bennett et al., 2010).*

Percent slope (%)	Downhill distance (feet)[1]	Uphill distance (feet)[1]	Total fuel treatment width (feet)
0	150	150	300
10	165	140	305
20	180	130	310
30	195	120	315
40	210	110	320
50	225	100	325
60	240	100	340

[1]Measurements are from the top of the hill for downhill distances and above the road cut for uphill distances. Distances are measured parallel to flat ground, not along the slope.

***Table 4.c.2**. Examples of conditions occurring along roadways in Coos County and suggestions for improvement (all photos by The Ember Alliance).*

Roadway example	Suggestions for improvement
	• Clear gorse from a wider area away from the road and maintain treatments over time to prevent high-intensity wildfire from encroaching the road (like a fire did in 2015—see burnt trees in the image). • Cut dead trees that might fall across the road.
	• Remove low limbs to increase access for fire engines. • Prevent limbs from overhanging and touching each other across the road. • Continue mowing roadside vegetation every year to increase visibility. • If there are concerns about firefighters or residents being on this road during wildfire, consider implementing a 150-foot shaded fuel break off each side of the road. • Create pullovers and turnaround areas for vehicles.
	• Trees were thinned in this area, which is a great start to making the road more fire resilient. • Remove shrubs to prevent fire from transitioning from the surface into tree canopies. • Commit to regular treatment of Scotch broom and gorse to eliminate these plants—a single treatment is not enough. • Remove dry slash along the roadside created by the recent fuel treatment. Consider replacing dry vegetation with rock if there are concerns about ignitions from vehicles along the road that could spread.
	• This road looks great! Annual mowing alongside the road will prevent tall grass from growing, which could carry a rapidly spreading wildfire if an ignition were to start from cars or vehicles on the road.

4.d. Priority Project Areas for Coos County

Altering potential wildfire behavior and restoring ecological conditions requires a landscape-scale approach to treatments across ownership boundaries. Prioritized project areas were located for roadside fuel treatments, ecological restoration, and/or stand-level fuel treatments within and around Coos County to be implemented in the next 5-10 years (**Figure 4.d.1**; **Table 4.d.1**). These project areas cross ownership boundaries and require community-wide commitment, coordination, and collaboration among private landowners, public land managers, and forestry professionals to create successful outcomes.

Participants at the project prioritization meeting for the Coos County CWPP.

Project areas for the 2026 Coos County CWPP were identified by the steering committee and partners based on considerations of potential need for treatment, location of previous fuel treatments and planned future work, evacuation concerns, locations of highly valued resources, and other feasibility considerations. The potential need for treatment was assessed based on potential home exposure to wildfire, non-survivable roadways, conditional net value change to watersheds, wildlife habitat, ecological integrity, and timber from wildfire, suppression difficulty, ignition density, and burn probability (see **Appendix B** for methodology).

Representatives from Coos County Emergency Management, fire protection districts, and various partner agencies and organizations met in Coquille on September 18, 2025, to identify potential project areas. The CWPP steering committee further refined these project areas, define project objectives, and assign project leads in winter 2025. Many partner organizations were invited to contribute feedback, and those that included the in-person meeting included representatives from the Oregon State Fire Marshall, Oregon State University Extension, Oregon Department of Food and Agriculture, CFPA, American Red Cross, City of Bandon, Gorse Action Group, Bay Area Hospital, Coos Bay Rail Line, Coos County Airport District, and Coos-Curry Electric Cooperative. Follow-up conversations were held with the BLM, U.S. Forest Service, and Coos County Weed Board. Priority project areas from CTCLUSI and the Coquille Indian Tribe were identified from their own management plans (see **Section 3.c. Tribal Priorities**).

CWPP project area are depicted in **Figure 4.d.1**, and **Table 4.d.1** describes proposed leads, proposed partners, project priority, rationale, and strategic alignment for each project. Some projects will require coordination, funding, and other enabling conditions before implementation can begin. Specific treatment specifications will need to be determined by project leads and partners after thorough site assessments. Treatments need to comply with new forest practices adopted by ODF in 2024 for small and large forest landowners, which include considerations for the protection of riparian and fish habitat. Management on federal land must comply with the Northwest Forest Plan and future amendments to the plan.

The CWPP implementation plan for stand-level and roadside treatments focuses on high-priority locations, but this does not discourage ecological restoration and fuel mitigation in other areas. If multiple neighbors work together to mitigate fire risk across ownership boundaries, it could attract funding and increase the priority and effectiveness of treating those areas. Coos County, local organizations, residents, and land managers should reevaluate fire risks and reprioritize treatment units as conditions change over time.

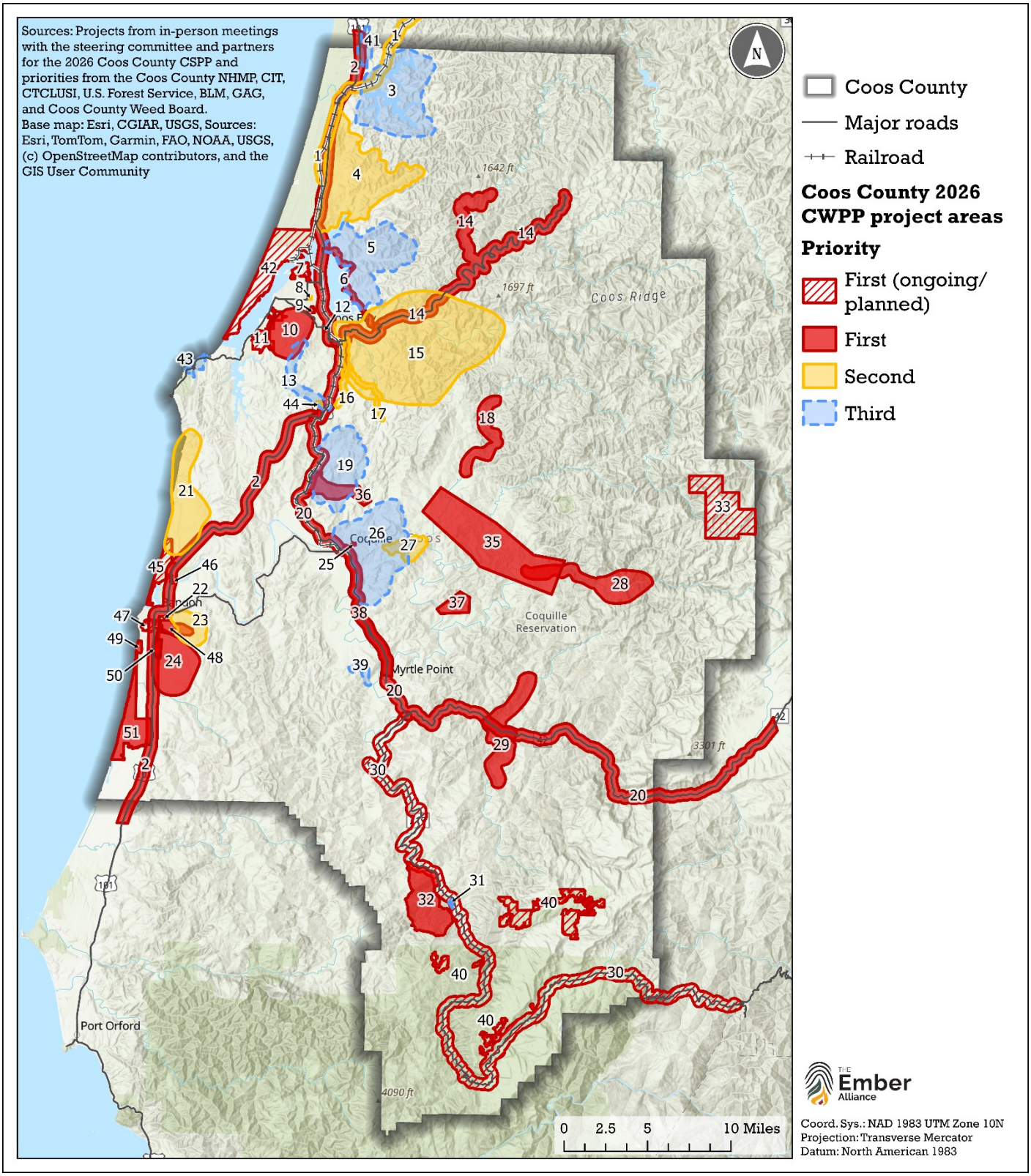


Figure 4.d.1. *Priority project areas for the 2026 Coos County CWPP. See project details in* ***Table 4.d.1****. Source: Projects from in-person meetings with the steering committee and partners for the 2026 Coos County CWPP and priorities from the Coos County NHMP, CIT, CTCLUSI, U.S. Forest Service, BLM, GAG, and Coos County Weed Board.*

Table 4.d.1. Description of priority project areas for the 2026 Coos County CWPP. Treatment ID's correspond to numbered labels in **Figure 4.d.1**.

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
1	Infrastructure protection	Coos Bay Rail Line	Coos Bay Rail Line	CFPA	Second	Treatments along Coos Bay Rail Line can help reduce risk of sparks from the tracks causing wildfires. Parts of the rail line near Ten Mile Lake are in sub-watersheds with the very high potential need for treatment, and this area falls within a GAG control zone for early detection and rapid response. Treating transportation corridors is important to reduce the spread of gorse and other invasive species. CFPA can help provide Oregon OSHA fire training to the rail line employees.	Priority for Coos Bay Rail Line. GAG control zone for early detection and rapid response
2	Roadside fuel treatment and weed abatement	Highway 101	ODOT	Landowners with property abutting the highway right-of-way, GAG	First	Highway 101 is the primary north-south access/egress route for Coos County. While the model predicts survivable conditions along almost all of 101, there are many areas with gorse and ladder fuels growing under dense forest canopies and steep slopes off the sides of the road where conditions could become risky during a wildfire. Cars and trucks on Highway 101 can serve as potential ignition sources for wildfires. Trees have blown over and blocked the road in the past, so ensuring that vegetation is adequately managed along Highway 101 is critical for safety. The 101 corridor falls within several GAG core containment and control zones. Treating transportation corridors is important to reduce the spread of gorse and other invasive species. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Some Census block groups along Highway 101 fall in the moderate to high and highest categories of social vulnerability.	GAG core containment and control zones.
3	Roadside fuel treatment and weed abatement	Roads in Ten Mile Lake area	Private citizens / community leaders need to step forward to organize and lead this project	Lakeside RFPD, Oregon Parks & Recreation, Coos County Parks, Coos County Public Works, GAG, private and industrial landowners	Third	There are many homes in the Ten Mile Lake area and few potential access/egress options, coupled with potentially non-survivable conditions along many roads. There are also many recreators in the area visiting the Wil. F. Tugman State Park and Tenmile Lake Park. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. The Tenmile Lake-Tenmile Creek Watershed has a high-moderate importance for surface drinking water. This area is a GAG control zone for early detection and rapid response. It is critical to treat isolated patches of gorse before they spread and become recalcitrant and even more difficult to eradicate. Treating transportation corridors is also important to reduce the spread of gorse and other invasive species.	GAG control zone for early detection and rapid response.
4	Fuel treatments for community protection	Hauser and North Bay community protection	Private citizens / community leaders need to step forward to organize and lead this project	Hauser RFPD, North Bay RFPD, Coos County Public Works, American Red Cross, CFPA, private and industrial landowners	Second	Hauser RFPD falls in the moderate relative risk category and North Bay Falls into the high-risk category compared to other FPDs. Sub-watersheds east of Hauser have high to very high potential need for treatment to protect homes in drainages along North Way and Haynes Way Lane. There are neighborhoods with evacuation concerns and potentially non-survivable roadways east of Hauser. A resiliency hub with pre-positioned resources is also present at a church in Hauser. Portions of this area fall within a Census block group in the highest category of social vulnerability.	Priority for the Red Cross because of the resilience hub at the Hauser Community Church.
5	Fuel treatments for community protection	Glasgow community protection	Private citizens / community leaders need to step forward to organize and lead this project	North Bay RFPD, CFPA, Coos County Public Works, private and industrial landowners	Third	The Coos Bay Watershed has some of the highest importance for surface drinking water in the state of Oregon. Hauser RFPD falls in the moderate relative risk category compared to other FPDs. There are also neighborhoods with evacuation concerns and potentially non-survivable roadways east of Glasgow, namely Carlson Heights Lane and Kentuck Way Lane. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. Mettman Ridge Road could form a potential control line along the ridgetop, and treatments along this road could increase safe access to the communication tower on Mettman Ridge.	
6	Roadside fuel treatment	East Bay Drive	Coos County Public Works	Private landowners	First	If the Conde McCullough Memorial Bridge were to become impassible, East Bay Drive would become the only alternative path to travel north and south to Highway 101. It is vital to remove hazardous fuels and maintain adequate pullovers along this road for evacuation safety.	

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
7	Infrastructure protection and weed abatement	Southwest Oregon Regional Airport	Coos County Airport District	GAG	First (ongoing)	The area around the airport is heavily infested by Scotch broom, and there are some patches of gorse. The Airport District began aggressively treating for Scotch broom, and maintenance treatments are required to ensure long-term success and reduce the potential for fires to impact the airport and surrounding area, which includes the North Bend Sewage Treatment Plan, North Bend Fire Department Station 2, and the Oregon State Police Coos Bay Area Command. Part of this area is a GAG control zone for preventing further spread of gorse. The Census block group in this area falls in the moderate to high category of social vulnerability.	Priority for Southwest Oregon Regional Airport. GAG control zone.
8	Infrastructure protection	North Bend Nazarene Church	American Red Cross, City of North Bend, North Bend Nazarene Church		Second	The Red Cross uses North Bend Nazarene Church to position resources during disaster. The area around North Bend Nazarene Church is owned by the City of North Bend. While the potential for high-severity wildfire is low in this area, it is important to conduct regular maintenance of vegetation around critical infrastructure that might be needed during an emergency.	Priority for the Red Cross.
9	Infrastructure protection	Bay Area Hospital	Bay Area Health and Hospital District, American Red Cross		First	The area south of the Bay Area Hospital is covered in dense vegetation. While the potential for high-severity wildfire is low in this area, it is important to conduct regular maintenance of vegetation around critical infrastructure that serves the community. Flat areas around the hospital could be used by the American Red Cross as a shelter location during emergencies if it is properly maintained. The Census block group in this area falls in the moderate to high category of social vulnerability.	Priority for the Red Cross and Bay Area Hospital.
10	Infrastructure protection and weed abatement	Coos Bay North Bend watershed	Coos Bay North Bend Water Board, City of North Bend	Coos Watershed Association, GAG	First	Upper Pony Creek Reservoir is a critical water supply for Coos Bay and North Bend, and the Coos Bay Watershed has some of the highest importance for surface drinking water in the state of Oregon. Mitigating fire risk in this area could reduce potential post-fire sedimentation and water quality issues. This project area overlaps with priority areas identified by Coos Bay North Bend Water Board, as well as being a GAG control zone for early detection and rapid response. It is critical to treat isolated patches of gorse before they spread and become recalcitrant and even more difficult to eradicate. Census block groups in this area fall in the moderate to high category of social vulnerability.	Priority for Coos Bay North Bend Water Board. GAG control zone for early detection and rapid response.
11	Fuel treatments for community protection, infrastructure protection, and weed abatement	Coquille Reservation community protection	Coquille Tribe	Coos County Emergency Management, Coos County Public Works, CFPA, GAG	First (ongoing)	**Note:** This plan does not suggest that fuel treatments will occur across the entire Reservation. Tribal leaders and members will determine the location of priority projects and the exact type of work to be completed. The Coquille Tribe Reservation (Kilkich) falls into the moderate relative risk category, and sub-watersheds in the area fall into the moderate category for potential need for treatment, but there are dense forests across much of the community and many highly valued resources and assets, including Tarheel Reservoir and Fourth Creek Pond. Portions of the reservation are in the Coos Bay Watershed, which has some of the highest importance for surface drinking water in the state of Oregon. There are Scotch broom infestations in the area, and it is part of a GAG control zone for early detection and rapid response. It is critical to treat isolated patches of gorse before they spread and become recalcitrant and even more difficult to eradicate. The Tribe has already begun treatments to protect roadways and create community fuel breaks, and the work will take several years to complete. Treatments along the roadways can make them safer for residents, firefighters, and other first responders. The Coquille Reservation was identified as a priority project in the 2011 Coos County CWPP. The Census block group in this area falls in the moderate to high category of social vulnerability.	Priority for the Coquille Tribe. Priority in the 2011 Coos County CWPP. GAG control zone.
12	Infrastructure protection	Coos Bay Fire Station No. 1	Coos Bay Fire Rescue, American Red Cross		First	The Red Cross could prepositions resources during disasters at Coos Bay Fire Station No. 1. While the potential for high-severity wildfire is low in this area, it is important to conduct regular maintenance of vegetation around critical infrastructure such as the fire station.	Priority for the Red Cross.

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
13	Fuel treatments for community protection	Coos Bay, Eastside, and Libby community protection	Private citizens / community leaders need to step forward to organize and lead this project	Coos Bay Fire Rescue, Libby RFPD, Central Coos Fire & Rescue, CFPA, private and industrial landowners	Third	Coos Bay Fire Rescue, Libby RFPD, and Millington RFPD (serviced by Central Coos Fire & Rescue) fall into the moderate relative risk category, and there are numerous highly valued resources and assets in this area. The Isthmus Slough watershed has very high importance for surface drinking water. Treatments along ridgetops southwest of Libby could assist in fire suppression and protection of these communities if wildfire were to spread from the southwest. There are also two communication towers along these ridgetops at Blossom Hill and Teletron Knoll. Some Census block groups that could benefit from this treatment fall into the moderate to high and highest categories of social vulnerability.	
14	Roadside fuel treatment	OR 241 and CR 47	ODOT, Coos County Public Works, Oregon State Parks	Private and industrial landowners, CFPA	First	County Road 241 (Coos River Hwy) and CR 47 (W. Fork Millicoma Road) are the primary access/egress route for the many people who live in the Allegany area, which falls in the highest relative risk category for Coos County. The area also includes the Golden and Silver Falls State Natural Areas and Millicoma Myrtle Grove State Park Picnic Area. Portions of these roads could experience potentially non-survivable conditions during a wildfire. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. CFPA assisted with defensible space projects around homes in Allegany, and some of these treatments made roadside conditions safer.	Golden and Silver Falls State Natural Areas were priorities in the 2011 Coos County CWPP.
15	Fuel treatments for community protection and roadside fuel treatments	Eastside, Daniels Creek, and S Coos River Lane community protection	Private citizens / community leaders need to step forward to organize and lead this project	Coos Bay Fire & Rescue, Timber Park FD, Coos County Public Works, CFPA, BLM, private and industrial landowners	Second	Daniels Creek-South Fork, Millicoma River, Catching Slough, and Coos River Watersheds have some of the highest importance for surface drinking water in the state of Oregon. The unprotected area of Daniels Creek and S Coos River Lane is in the highest relative risk category. There are numerous homes in the area and several community lifelines, including a communication tower on Noah Butte, Coos Bay Fire Department - Eastside Station, Central Coos Fire & Rescue Station 4, Millicoma School, and Eastside School. Several neighborhoods have the potential for evacuation challenges and non-survivable conditions along roadways. Treatments along the roadways can make them safer for residents, firefighters, and other first responders. One Census block group in this area falls in the highest category of social vulnerability.	Priority in the 2011 Coos County CWPP.
16	Roadside fuel treatment	Oliver Barber Road	Coos County Public Works, Central Coos Fire & Rescue	Private landowners	Second	Oliver Barber Road is an important access/egress route for residents on the east side of the Isthmus Slough and in Millington RFPD (serviced by Central Coos Fire & Rescue). Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. One Census block group in this area falls in the highest category of social vulnerability.	
17	Roadside fuel treatment	Old Wagon Road	Coos County Public Works, Central Coos Fire & Rescue	Private landowners	Second	Old Wagon Road is an important access/egress route for residents on the east side of the Isthmus Slough and in Sumner RFPD (serviced by Central Coos Fire & Rescue). Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. The Census block group in this area falls in the highest category of social vulnerability.	Priority in the 2011 Coos County CWPP.
18	Roadside fuel treatment	Fairview Road	Coos County Parks Department, Coos County Public Works	Fairview RFPD, BLM, private and industrial landowners	First	Fairview road is the primary access / egress for many residents, and it is heavily utilized by recreators that visit Laverne County Park. There is dense vegetation growing along much of this road and conditions could become nonsurvivable during a wildfire. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders.	Priority in the 2011 Coos County CWPP.
19	Fuel treatments for community protection	Greenacres community protection	Private citizens / community leaders need to step forward to organize and lead this project	Greenacres RFPD, CFPA, private and industrial landowners	Third	Greenacres RFPD falls into the high relative risk category, and fuel treatments along the eastside of the RFPD could protection homes in the community of Green Acres and along Beaver Creek Lane. The Isthmus Slough and Catching Slough Watersheds have very high importance for surface drinking water.	Overlaps with Gorse and Scotch broom priority area 2 from the updated Coos County Weed Board strategic plan.

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
20	Roadside fuel treatment and weed abatement	Highway 42	ODOT	Landowners with property abutting the highway right-of-way	First	Highway 42 is an important access/egress route for southern Coos County. While the model predicts survivable conditions along most of Highway 42, there are many areas with ladder fuels growing under dense forest canopies and steep slopes off the sides of the road where conditions could become risky during a wildfire. Cars and trucks on Highway 42 can serve as potential ignition sources for wildfires. The road is also a vector for gorse spread, so ongoing mitigation of weeds and monitoring of spread is critical to prevent further infestation. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. Highway 42 also falls along the boundary of several potential operational delineations (PODs), and treating along PODs creates strategic opportunities for firefighters to engage wildfires and to conduct proactive fuel management such as broadcast prescribed burns. Some Census block groups along Highway 42 fall in the moderate to high and highest categories of social vulnerability.	Highway 42 falls along the boundaries of several potential operational delineations (PODs). Portion of Highway is within Jubata grass priority area 1 from the Coos County Weed Board updated strategic plan.
21	Roadside fuel treatment and weed abatement	Seven Devils and Bandon Dunes mitigation	Bandon Dunes Resort, Oregon Parks & Recreation, Coos County Public Works	GAG, private landowners	Second	Wildfires burned through gorse in this area in 2007 and 2015. There are many homes and recreators in the area of Bandon Dunes Golf Resort and Whiskey Run Beach, and the roads are lined by dense patches of gorse growing under forest canopies, which could result in unsafe conditions along important access/egress routes. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. The area falls within GAG control and core containment zones, and treating transportation corridors is important to reduce the spread of gorse and other invasive species. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Census block groups in this area fall in the moderate to high category of social vulnerability.	Priority in the 2011 Coos County CWPP. GAG control and core containment zones.
22	Infrastructure protection	Southern Coos General Hospital	Southern Coos General Hospital District, Southern Coos Health District	Coos County Emergency Management, CFPA	First	There is dense vegetation around the north and east sides of Southern Coos General Hospital, and sub-watersheds in this area have high to very high potential need for treatment. It is important to conduct regular maintenance of vegetation around critical infrastructure that serves the community. The area is in the City of Bandon Gorse Abatement District and a GAG core containment zone, and it is part of Ferry Creek Watershed—a priority area in the 2023 Coos County Estuarine Resilience Action Plan. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort.	Priority in the 2011 Coos County CWPP. GAG core containment zone. Priority watershed in the 2023 Coos County Estuarine Resilience Action Plan.
23	Infrastructure protection	Bandon Hatchery and City of Bandon Water Infrastructure	City of Bandon, Oregon Dept. of Fish & Wildlife	Coquille Watershed Association, Coos County Public Works, GAG, private landowners	Second	Sub-watersheds that contain the Bandon Hatchery and infrastructure for the City of Bandon's water treatment plant have a moderate to high potential need for treatment. The hatchery is important for the rearing of Chinook salmon, steelhead, and rainbow trout. If a fire were to occur in the area, it could lead to post-fire sedimentation and water quality issues. The area is also within a GAG core containment zone, and it is part of Ferry Creek Watershed—a priority area in the 2023 Coos County Estuarine Resilience Action Plan. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Some Census block groups in this area fall in the moderate to high and highest categories of social vulnerability.	GAG core containment zone. Priority watershed in the 2023 Coos County Estuarine Resilience Action Plan.
24	Roadside fuel treatment and fuel treatments for community protection	Rosa Road area	Private citizens / community leaders need to step forward to organize and lead this project	Coos County Public Works, GAG, CFPA, private landowners	First	There is dense vegetation growing along much of Rosa Road and side roads in the area, and conditions could become nonsurvivable during a wildfire. The high density of homes, presence of cranberry farms that have a high seasonal workforce, and dead-end roads could create safety issues during evacuations if roads become unpassable. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. The area is also within a GAG core containment zone, and treating transportation corridors is important to reduce the spread of gorse and other invasive species. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Census block groups in this area fall in the moderate to high and highest categories of social vulnerability.	GAG core containment zone.

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
25	Infrastructure protection	Coquille Valley Hospital	Coquille Valley Hospital	Coquille Fire Department, Coos County Emergency Management, CFPA	First	There is dense vegetation around Coquille Valley Hospital, and sub-watersheds in this area have a high potential need for treatment. It is important to conduct regular maintenance of vegetation around critical infrastructure that serves the community.	Priority in the 2011 Coos County CWPP.
26	Fuel treatments for community protection	City of Coquille community protection	Private citizens / community leaders need to step forward to organize and lead this project	Coquille Fire Department, CFPA, BLM, private and industrial landowners	Third	Coquille RFPD falls into the high relative risk category. There are numerous community lifelines in the area, including Rink Reservoir. Roads in the area that could experience potentially non-survivable conditions include Fairview Road, Shelly Lane, and Glenn Aiken Circle Road. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. Some Census block groups in this area fall in the moderate to high category of social vulnerability.	Priority in the 2011 Coos County CWPP.
27	Infrastructure protection	Rink Reservoir	City of Coquille	Coquille Watershed Association, Coos County Parks Department, BLM	Second	Rink Reservoir is a critical water supply for the City of Coquille. The area includes portions of Park Prairie Park. While sub-watersheds around the reservoir have a lower potential need for treatment to reduce the potential for wildfire, if a fire were to occur in the area, it could lead to post-fire sedimentation and water quality issues. Restoring riparian habitat in the Rink Reservoir area is also a priority in the 2023 Coos County Estuarine Resilience Action Plan. Some Census block groups that rely on Rink Reservoir fall in the moderate to high category of social vulnerability.	Priority in the 2023 Coos County Estuarine Resilience Action Plan.
28	Fuel treatments for community protection and roadside fuel treatment	Sitkum community protection	Private citizens / community leaders need to step forward to organize and lead this project	Dora-Sitkum RFPD, CFPA, BLM, private and industrial landowners	First	Dora-Sitkum RFPD falls into the highest relative risk category. Most roads in the area could experience potentially non-survivable conditions during wildfire. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders.	
29	Fuel treatments for community protection and roadside fuel treatment	Bridge community protection	Private citizens / community leaders need to step forward to organize and lead this project	Bridge RFPD, CFPA, BLM, private and industrial landowners	First	Bridge RFPD falls into the highest relative risk category. Many roads in the area could experience potentially non-survivable conditions during wildfire. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders.	Priority in the 2011 Coos County CWPP.
30	Roadside fuel treatment	CR 542	U.S. Forest Service, ODOT, Coos County Public Works	BLM, Private and industrial landowners	First (ongoing)	County Road 542 is the primary access/egress route for the portion of the Rogue River - Siskiyou National Forest in Coos County. Much of this road could experience potentially non-survivable conditions during wildfire. There could be many recreators and residents from southern Coos County who need to use this road during an evacuation, and it would be an important access route for fire fighters trying to respond to fires in the area. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. County Road 542 falls along the boundaries of several potential operational delineations (PODs) and treating along PODs creates strategic opportunities for firefighters to engage wildfires and to conduct proactive fuel management such as broadcast prescribed burns. The U.S. Forest Service conducted roadside vegetation removal along CR 542 in 2017, 2015, 2014, 2012, 2010, and 2008, and the BLM conducted timber sales around the road in 2013 and 2011. It is important to retreat areas to extend the effectiveness of fuel treatments given the rapid regrowth of vegetation in southwestern Oregon. Some Census block groups along CR 542 fall in the moderate to high and highest categories of social vulnerability.	CR 542 falls along the boundaries of several potential operational delineations (PODs).
31	Infrastructure protection	Powers landing strip	Port of Coquille River		First	Fuel treatments on and around the Powers Airstrip can ensure this area is ready for use during medical emergencies or for aerial resources during wildfires. This area is in a Census block group in the highest category of social vulnerability.	

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
32	Fuel treatments for community protection	Powers community protection	Private citizens / community leaders need to step forward to organize and lead this project	BLM, CFPA, Powers FD, private and industrial landowners	First	Powers FD and the unprotected Powers outskirts fall into the highest relative risk category, and some sub-watersheds in the area have high potential need for treatment. Many roads in the area could experience potentially non-survivable conditions during wildfire. Fuel treatments southwest of the community could protect homes and community lifelines from wildfires moving out of the southwest, and treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. The area also includes several potential operational delineations (PODs), and treating PODs creates strategic opportunities for firefighters to engage wildfires and to conduct proactive fuel management such as broadcast prescribed burns. This area is in a Census block group in the highest category of social vulnerability.	Priority in the 2011 Coos County CWPP. Area includes several potential operational delineations (PODs).
33	Timber sale	Tioga Tract	Confederated Tribes of the Coos, Lower Umpqua, & Siuslaw Indians (CTCLUSI)		First (planned)	The CTCLUSI have plans to conduct the 36-acre Hawatit Timber Sale on the Tioga Tract in the eastern portion of Coos County.	Priority for the CTCLUSI.
34	Infrastructure protection	Communication towers	Coos County Emergency Management, BLM, USFS, CFPA, communication providers		First (planned)	Treatments around communication infrastructure and roads used to access the towers can ensure communications remain functional and accessible during emergencies.	Several towers were identified as priorities in the 2011 Coos County CWPP.
35	Weed abatement	Gorse and Scotch broom priority area 1	Coos County Weed Board, Coos County Public Works	BLM, GAG, private and industrial landowners	First	Gorse and Scotch broom are present in the area along roads and on private, industrial, and BLM land, and these noxious weeds can exacerbate fire behavior. Some sub-watersheds in this area have high to very high potential need for treatment. Weed abatement along roads is important to reduce the spread of gorse and other invasive species.	Priority in the updated Coos County Weed Board strategic plan.
36	Weed abatement	Gorse and Scotch broom priority area 2	Coos County Weed Board, Coos County Public Works	BLM, GAG, private and industrial landowners	First	Gorse and Scotch broom are present in the area along roads and on private, industrial, and BLM land, and these noxious weeds can exacerbate fire behavior. Some sub-watersheds in this area have high potential need for treatment. Weed abatement along roads is important to reduce the spread of gorse and other invasive species. Some Census block groups in this area fall in the moderate to high category of social vulnerability.	Priority in the updated Coos County Weed Board strategic plan.
37	Weed abatement	Gorse priority area 3	Coos County Weed Board	BLM, GAG, private and industrial landowners	First	Gorse is present in the area along roads and on private, industrial, and BLM land, and this noxious weed can exacerbate fire behavior. Weed abatement along roads is important to reduce the spread of gorse and other invasive species. Some Census block groups in this area fall in the moderate to high category of social vulnerability.	Priority in the updated Coos County Weed Board strategic plan.
38	Weed abatement	Jubata grass priority area 1	Coos County Weed Board, ODOT	GAG, private landowners	First	Jubata grass is common on private land in this area because this invasive plant is often used in landscaping. However, jubata can spread, and it produces abundant dry fuels that can exacerbate fire behavior.	Priority in the updated Coos County Weed Board strategic plan.
39	Roadside fuel treatment	Pleasant Valley Lane	Private citizens / community leaders need to step forward to organize and lead this project	Coos County Public Works, private and industrial landowners	Third	Many residents live along Pleasant Valley Lane, which is their only egress route. There is dense vegetation growing along much road, and conditions could become nonsurvivable during a wildfire. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders.	

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
40	Forest health and fire mitigation	Woody Eden treatment area	U.S. Forest Service		First (planned)	The U.S. Forest Service is beginning to plan fuel treatments and timber sales on approximately 5,500 acres on the Rogue River - Siskiyou National Forest in southern Coos County for the purpose of forest health and fire mitigation. The area includes several potential operational delineations (PODs), and treating PODs creates strategic opportunities for firefighters to engage wildfires and to conduct proactive fuel management such as broadcast prescribed burns. The U.S. Forest Service conducted thinning and pile burning in some of these stands between 2015-2025. It is important to retreat areas to extend the effectiveness of fuel treatments given the rapid regrowth of vegetation in southwestern Oregon. Census block groups in this area fall in the moderate to high category of social vulnerability.	Includes several POD boundaries.
41	Weed abatement	Wil. F. Tugman State Park	OPRD	GAG	Third	Wil F. Tugman State Park is located close to Highway 101 and provides year-round campsites and day use opportunities. This area partially falls in a GAG control zone for early detection and rapid response. It is critical to treat isolated patches of gorse before they spread and become recalcitrant and even more difficult to eradicate. Ongoing education to recreators about campfire prohibitions during fire season is also critical to reduce wildfire risk.	GAG control zone for early detection and rapid response.
42	Weed abatement	North Spit	USFS, BLM, USFWS, adjacent private landowners	GAG	First (ongoing)	North Spit is comprised of portions of the Siuslaw National Forest and Coos Bay District of the BLM Umpqua Research Area. It contains hiking trails, sand driving roads, and dispersed camping opportunities. The area contains critical habitat for the threatened western snowy plover. Removing gorse, Scotch broom, and other non-native plants are one component of restoring open sand beach environments to protect this species. There have been numerous fire ignitions on North Spit from recreators, including a 1- acre fire in 1994 and a 10-acre fire in 2022. Part of this area is a GAG control zone for preventing further spread of gorse and reducing the possibility of gorse-fueled wildfires. Ongoing education to recreators about campfire prohibitions during fire season is also critical to reduce wildfire risk. The Census block group in this area falls in the moderate to high category of social vulnerability.	GAG control zone.
43	Weed abatement	Sunset Bay State Park	OPRD, ODOT, adjacent private landowners	GAG	Third	Sunset Bay State Park is a heavily utilized recreation area, and it has only one access point (Cape Arago Highway), which creates potential concerns for evacuation congestion for the thousands of recreators to Sunset Bay, Shore Acres, and Cape Arago State Parks. There is dense vegetation growing along much of this road. Preventing infestation by flammable noxious weeks like gorse is important to prevent wildfire risk from increasing in the area. Gorse mitigation is a priority objective in the 1986 Sunset Bay Management Unit Master Plan. Ongoing education to recreators about campfire prohibitions during fire season is also critical to reduce wildfire risk. The Census block group in this area falls in the moderate to high category of social vulnerability.	Weed abatement objective in the Sunset Bay Management Unit Master Plan.
44	Infrastructure protection	Coos County Animal Control Office	Coos County Sheriff's Office	CFPA	Second	The Coos County Animal Control Office is critical infrastructure to house animals during evacuations, and it is surrounded by dense vegetation. Creating a fuel break around the property could reduce the risk of wildfire impinging upon the property and provide a chance for firefighters to suppress wildfire.	

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
45	Weed abatement	Bullards Beach State Park	OPRD	GAG	First (ongoing)	Bullards Beach State Park is a heavily utilized recreation area, and it has only one access point (Bullards Beach Road), which creates potential concerns for evacuation congestion. The park is also important habitat for the threatened sand dune phacelia and western snowy plover. The park is infested with gorse, and OPRD has undertaken mowing, mulching, spraying, and reseeding to remove gorse and restore native dune grass and open beach habitat. Ongoing maintenance and additional mitigation are vital to prevent additional spread, restore habitat, and reduce the risk of high-intensity wildfire fueled by gorse. In addition to weed abatement, ongoing education to recreators about campfire prohibitions during fire season is also critical to reduce wildfire risk. The area falls within GAG control and core containment zones. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Gorse removal at Bullards Beach State Park is a priority in the 2023 Coos County Estuarine Resilience Action Plan and a priority objective in the 1986 Bullards Beach State Park Master Plan. The Census block group in this area falls in the moderate to high category of social vulnerability.	GAG control and core containment zones. Priority watershed in the 2023 Coos County Estuarine Resilience Action Plan. Weed abatement objective in the Bullards Beach State Park Master Plan. USFWS Recovery Outline for the Sand Dune Phacelia.
46	Weed abatement	Bullards Bridge	ODOT, US Fish and Wildlife Service, private landowners	GAG	First (ongoing)	Bullards Bridge is critical infrastructure for evacuations and emergency response. The area southeast of the bridge is heavily infested with gorse. GAG, ODOT, and other partners have begun gorse removal, and ongoing maintenance and additional mitigation are vital to prevent additional spread and reduce the risk of high-intensity wildfire fueled by gorse. The area falls within GAG control and core containment zones. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. The project area is adjacent to the Bandon Marsh National Wildlife Refuge managed by the U.S. Fish & Wildlife Service.	GAG control and core containment zones. Ongoing GAG project area.
47	Weed abatement	Donut Hole	Private landowners, developers	GAG	First (ongoing)	The “Donut Hole” is an area of about 185 small private parcels that is being developed in the Urban Growth Boundary of the City of Bandon. This neighborhood is an area of concern because of the high infestation of gorse, which can fuel high-intensity wildfire. Work is already underway by homeowners, developers, and the GAG to mitigate this threat. The area is covered by the City of Bandon Prohibited Vegetation Ordinance under the Coos County and City of Bandon Inter Governmental Agreement. It also area falls within GAG control and core containment zones, and it is part of Ferry Creek Watershed—a priority area in the 2023 Coos County Estuarine Resilience Action Plan. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Some Census block groups in this area fall in the moderate to high and highest categories of social vulnerability.	GAG control and core containment zones. Ongoing GAG project area. Priority watershed in the 2023 Coos County Estuarine Resilience Action Plan.
48	Infrastructure protection, roadside fuel treatment, and weed abatement	Coos-Curry Electric Substation / Bill Creek Lane area/ Harvard Street Apartments	Coos Curry-Electric, private landowners	Coos County Public Work, GAG	First	This area includes a substation owned and operated by Coos Curry-Electric, numerous private residences, including Harvard Street Apartments, and cranberry farms. There is dense vegetation growing along portions of Bill Creek Lane and side roads in the area, and conditions could become nonsurvivable during a wildfire. The high density of homes, presence of cranberry farms that have a high seasonal workforce, and dead-end roads could create safety issues during evacuations if roads become unpassable. Treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders. These treatments need to include treatment of gorse and other flammable noxious weeds. Part of this project area is covered by the City of Bandon Prohibited Vegetation Ordinance under the Coos County and City of Bandon Inter Governmental Agreement, and it falls within a GAG core containment zone. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. The area is also part of Ferry Creek Watershed—a priority area in the 2023 Coos County Estuarine Resilience Action Plan. Some Census block groups in this area fall in the moderate to high and highest categories of social vulnerability.	GAG core containment zone. Priority watershed in the 2023 Coos County Estuarine Resilience Action Plan.

ID	Treatment category	Name	Proposed lead(s)[1]	Proposed partner(s)	Priority	Description and rationale	Strategic alignment
49	Weed abatement	Sunset City Subdivision	Private landowners	GAG	First	The Sunset City Subdivision is a densely developed part of the Urban Growth Boundary of the City of Bandon. This neighborhood is an area of concern because of the high infestation of gorse, which can fuel high-intensity wildfire. The area is covered by the City of Bandon Prohibited Vegetation Ordinance under the Coos County and City of Bandon Inter Governmental Agreement. The area also falls within GAG control and core containment zones. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort.	GAG control and core containment zones.
50	Infrastructure protection and weed abatement	Bandon State Airport / Kehl Road area	Oregon Department of Aviation, private landowners	GAG	First	The Bandon State Airport is owned and operated by the Oregon Department of Aviation, and this property and surrounding private land around Kehl Road fall within a GAG core containment zone. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. The area is covered by the City of BandonProhibited Vegetation Ordinance under the Coos County and City of Bandon Inter Governmental Agreement. The Census block group in this area falls in the highest category of social vulnerability.	GAG core containment zone.
51	Weed abatement and fuel treatments for community protection	Bandon State Natural Area, New River ACEC, and surrounding WUI	BLM, USFWS, ORPD, ODFW, private landowners	GAG, CFPA	First	This project area includes Bandon State Natural Area—a well-visited property with beach access and day-use areas—and the New River Area of Critical Environmental Concern (ACEC), which is administered by the Bureau of Land Management. The area contains critical habitat for the threatened sand dune phacelia and western snowy plover. Removing gorse, Scotch broom, and other non-native plants are one component of restoring native dune grass and open sand beach environments to protect these species. The BLM has already begun work to restore dune habitat on the New River ACEC. The area falls within GAG control and core containment zones. Core containment zones are heavily infested areas with large, contiguous patches of gorse, and mitigation in these zones takes large, well-planned investments of time and effort. Fuel treatments on public and private land in the area could protect homes and community lifelines from wildfires moving out of the west, and treatments along the roadways can make them safer for residents, recreators, firefighters, and other first responders.	GAG control and core containment zones. USFWS Recovery Outline for the Sand Dune Phacelia. USFWS Recovery Plan for the Pacific Coast Population of the Western Snowy Plover.

[1] For several projects, a specific lead has not been identified because the project will require private citizens / community leaders to step forward to organize, coordinate, and lead the project. Partner organizations can support the projects, but they have limited capacity, and citizen involvement is necessary to address shared fire risk.

4.e. Logistics of Fuel Treatments

Roles and Responsibilities for Fuel Treatments

Landowners are responsible for fuel mitigation on their own lands, including along their private driveways. Residents must initiate and follow through on this work, but that does not mean they must do it alone. For assistance in planning and implementing fuel treatments, residents should contact the Oregon Department of Forestry (ODF), the Coos Forest Protective Association (CFPA), and the USDA Natural Resources Conservation Service (NRCS). These agencies provide technical assistance, funding guidance, and coordination with local contractors, or other wildfire mitigation specialists. Coos County can also reach out to volunteer organizations like Team Rubicon for support implementing hazardous fuel reduction.

Tree cutting with a chainsaw and other forestry equipment should be done by experienced and certified individuals. Oregon State University's Extension Services provide guidance for how to select a contractor for forest management, and they provide a list of local contractors (see link above for a list current as of November 2025).

Coos County agencies like Emergency Management, Parks, Public Works, and the Weed Board play a vital role in wildfire fuel mitigation through efforts such as invasive species control, hazard planning, and interagency coordination with other local, state, and federal agencies. Local fire departments, fire protection districts, and the Coos Fire Defense Board help identify high-risk areas and coordinate community protection efforts. CFPA helps with forest management, prescribed burning, fuel mitigation around structures, and fire suppression. The U.S. Forest Service and BLM manage federal lands in the region and implement large-scale fuel treatments and engage in wildfire suppression.

The responsibility for conducting roadside fuel treatments depends on the location of the road. Landowners are responsible for treatments along their private driveways. Coos County Public Works and Oregon Department of Transportation (ODOT) are responsible for clearing limbs along roads that they maintain. Utility companies, such as Coos-Curry Electric Cooperative, remove vegetation under their electric lines. Other private entities, such as Coos Bay Rail Line and Coos County Airport District are responsible for and actively undertake efforts to mitigate fuels on their properties. Sometimes fire protection districts will remove trees across major roads if Coos County Road and ODOT cannot rapidly respond. Cooperation from private property owners is necessary for effective roadside fuel treatments; roadside easements are rarely wide enough to satisfy the minimum of 150 feet treatment depth for shaded fuelbreaks along roads.

There is a need to reduce fuel loads along county roads for safety, but keep in mind that Coos County maintains approximately 529 miles of roadway and 124 bridges. Maintenance activities include road grading, ditching, culvert replacement and cleaning, spraying for vegetation control, paving and patching (cold mix), shoulder rocking, brushing and mowing, striping, signage, and bridge maintenance. They have a shrinking budget and workforce that means they need to prioritize where they work and cannot accomplish treatments on all roads. The CWPP analyses and priority projects can help support targeted and strategic action by Coos County Road Department.

Treatment Costs

The cost of fuel treatment depends on management objectives, treatment specifications, slope, accessibility, and treatment method (e.g., mechanical thinning, hand thinning, or prescribed burning). Follow-up treatments are generally less expensive than the initial entry and help maintain the efficacy of the original treatment investment, especially in Coos County where the climate encourages rapid plant regrowth. According to Oregon State University Extension Service, the cost of mechanical fuel reduction, as seen in **Table 4.a.2**, typically ranges from $40 to over $600 per acre (as of 2008), which is influenced by factors such as the method and equipment being used, vegetation characteristics, and how much area is treated. While mechanical treatments are often more cost-effective per acre than manual approaches, mobilizing and setting up large equipment, like Slashbusters, can be expensive. Consequently, treating small individual parcels may not be financially viable.

Coos County Emergency Management, local fire departments, CFPA, and other partners can apply to Oregon Department of the State Fire Marshall for funding, if and when funds become available, to support some of the work prioritized in this CWPP. Other funding sources are outlined in **3.g. Funding Opportunities**). When multiple landowners coordinate to treat adjacent parcels as a single project, the mobilization costs can be distributed across a greater acreage, improving overall affordability (Oregon Department of Forestry, 2025).

Since fuel treatments are expensive, it is important to conduct strategic, well-designed, landscape-scale treatments to increase the likelihood that fuel treatments modify fire behavior, save lives, and restore ecosystems. Fuel treatments can reduce property damages by making wildfires less damaging and easier to control; this is especially true for prescribed burning which is often cheaper and more effective at altering forest fuel loads than mechanical thinning alone (Fulé et al., 2012; Loomis et al., 2019; Prichard et al., 2020). Proactive management of forests can also reduce the cost of rehabilitating water sources when wildfires are followed by large storms and result in massive erosion (Jones et al., 2017). Fuel treatments can also reduce suppression costs due to the increased efficiency of firefighting (Loomis et al., 2019). Research suggests that "in the most valuable and at-risk watersheds, every dollar invested in forest restoration can provide up to seven dollars of return in the form of benefits and provide a return-on-invest of 600%" (Hjerpe et al., 2024).

5. Future of the CWPP

5.a. CWPP as a Living Document

CWPPs are a guide and a plan for action. They should be revisited and reviewed annually, at minimum, by Coos County and the CWPP Implementation Committee, potentially tied to the planned Coos and Curry CWPP Workgroup being led by CFPA and OSFM. Regular meetings of the CWPP Implementation Committee can include reviewing progress on priority actions, celebrating treatments, outreach events, new partnerships. and collecting implementation ideas for the next update. Through sustained investment and collaboration, Coos County can protect lives, property, cultural resources, and natural landscapes from the growing threat of wildfire.

The ODF suggests CWPPs to be updated on a regular basis. It is recommended to update them every 5 years, at a minimum. CWPPs greater than 10 years old are outdated and can exclude communities from successfully applying for competitive funding opportunities under programs like the Healthy Forest Restoration Act (HFRA), the National Cohesive Wildland Fire Management Strategy, and the Community Wildfire Defense Grant (CWDG) program (Oregon Department of Forestry, 2025) to ensure a comprehensive approach.

A Neighborhood Ambassador Program is a starting point for CWPP review that will be a community-based initiative which empowers residents to act as liaisons between their neighborhoods and organizations. Volunteers will be recruited and trained to represent their communities in outreach efforts and provide feedback to city agencies, nonprofits, and other organizations in Coos County responsible for the CWPP actions over the next 5 years. More information can be found at the Fire Adapted Communities Learning Network.

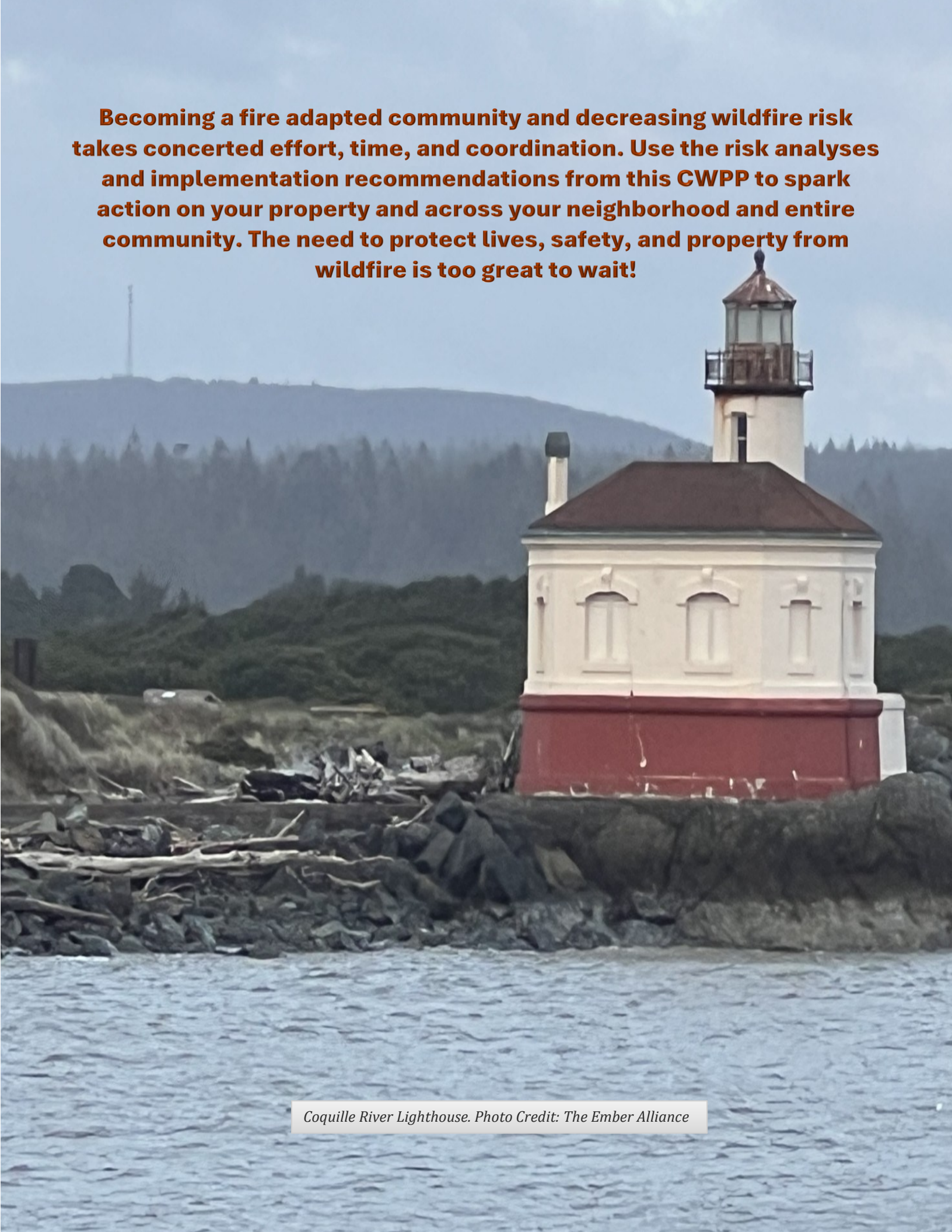
The update to this plan can either be a preface to this document or a new document that integrates with this one. The update to this plan must include:

- A description of progress and demographic changes made since the CWPP was created.
- Identification of new risks and updates to the risk analysis in the community.
- Updated and prioritized projects for the community with infrastructure, maps and descriptions.

The suggested review process involves:

- Hosting collaborative meetings with partners that have a vested interest while documenting completed projects and demographic/landscape changes to update wildfire risk reduction priorities and maps.
- Distributing drafts to Local Fire Defense Board and key partners for review and input before finalizing with Core Team signatures and submitting to Oregon Department of Forestry.
- Submit to County Board of Commissioners for final adoption.

Becoming a fire adapted community and decreasing wildfire risk takes concerted effort, time, and coordination. Use the risk analyses and implementation recommendations from this CWPP to spark action on your property and across your neighborhood and entire community. The need to protect lives, safety, and property from wildfire is too great to wait!



Coquille River Lighthouse. Photo Credit: The Ember Alliance

6. Glossary

20-foot wind speed: The rate of sustained wind over a 10-minute period at 20 feet above the dominant vegetation. The wind adjustment factor to convert surface winds to 20-foot wind speeds depends on the type and density of surface fuels slowing down windspeeds closer to the ground (NWCG, 2021).

Active crown fire: Fire in which a solid flame develops in the crowns of trees and advances from tree crown to tree crown independently of surface fire spread (NWCG, 2018b).

ArcCASPER: An intelligent capacity-aware evacuation routing algorithm used in the geospatial information system mapping program ArcMap to model evacuation times and congestion based on roadway capacity, road speed, number of cars evacuating per address, and the relationship between roadways congestion and reduction in travel speed (Shahabi and Wilson, 2014).

Basal area: Cross sectional area of a tree measured at breast height (4.5 feet above the ground). Used as a method of measuring the density of a forest stand in units such as ft^2/acre (USFS, 2021).

Broadcast prescribed burning (aka, prescribed burn, controlled burn): A wildland fire originating from a planned ignition in accordance with applicable laws, policies, and regulations to meet specific objectives (NWCG, 2018b).

Canopy fuels: The stratum of fuels containing the crowns of the tallest vegetation (living or dead), usually above 20 feet (NWCG, 2018b).

Canopy height: The average height of the top of the vegetated canopy (NWCG, 2019).

Canopy: The more or less continuous cover of branches and foliage formed collectively by adjacent tree crowns (USFS, 2021).

Canyon: A long, deep, very steep-sided topographic feature primarily cut into bedrock and often with a perennial stream at the bottom (NRCS, 2017).

Chain: Chains are commonly used in forestry and fire management as a measure of distance. 1 chain is equivalent to 66 feet. Chains were used for measurements in the initial public land survey of the U.S. in the mid-1800s.

Chute: A steep V-shaped drainage that is not as deep as a canyon but is steeper than a draw. Normal upslope air flow is funneled through a chute and increases in speed, causing upslope preheating from convective heat, thereby exacerbating fire behavior (NWCG, 2008).

Community Wildfire Protection Plan (CWPP): A plan developed in the collaborative framework established by the Wildland Fire Leadership Council and agreed to by state, Tribal, and local governments, local fire departments, other partners, and federal land management agencies in the vicinity of the planning area. CWPPs identify and prioritize areas for hazardous fuel reduction treatments, recommend the types and methods of treatment on Federal and non-Federal land that will protect one or more at-risk communities and essential infrastructure, and recommend measures to reduce structural ignitability throughout the at-risk community. A CWPP may address issues such as wildfire response, hazard mitigation, community preparedness, and structure protection (NWCG, 2018b).

Convection: A type of heat transfer that occurs when a fluid, such as air or a liquid, is heated and travels away from the source, carrying heat along with it. Air around and above a wildfire expands as it is heated, causing it to become less dense and rise into a hot convection column. Cooler air flows in to replace the rising gases, and in some cases, this inflow of air creates local winds that further fan the flames. Hot convective gases move up slope and dry out fuels ahead of the flaming front, lowering their ignition temperature and increasing their susceptibility to ignition and fire spread. Homes located at the top of a slope can become preheated by convective heat transfer. Convection columns from wildfires carry sparks and embers aloft.

Crown (aka, tree crown): Upper part of a tree, including the branches and foliage (USFS, 2021).

Cultural burning: The intentional application of fire to the land by an Indigenous person or cultural group (e.g., family unit, Tribe, clan/moiety, or society) to achieve cultural goals or objectives and based in Tribal or Traditional Indigenous law. It integrates holistic knowledge of place to guide the timing and implementation of burning activities. The reasons for cultural burning can be quite extensive, such as maintenance of travel corridors, wildlife habitat improvement, attracting wildlife to a place, water stewardship, pest control, stewardship of cultural plants, conservation, and spiritual, religious, or community ceremony (Clark et al., 2024).

Defensible space: The area around a building where vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire and reduce exposure to radiant heat and direct flame. It is encouraged that residents develop defensible space so that during a wildfire their home can stand alone without relying upon limited firefighter resources due to the great reduction in hazards they have undertaken.

Direct attack: Any treatment applied directly to burning fuel such as wetting, smothering, or chemically quenching the fire or by physically separating the burning from unburned fuel (NWCG, 2018b).

Draws: Topographic features created by a small, natural watercourse cutting into unconsolidated materials. Draws generally have a broader floor and more gently sloping sides than a ravine or gulch (NRCS, 2017).

Ecological restoration: The process of assisting the recovery of an ecosystem that has been damaged, degraded, or destroyed (SER, 2004).

Ember: Small, hot, and carbonaceous particles. The term "firebrand" is also used to connote a small, hot, and carbonaceous particle that is airborne and carried for some distance in an airstream (Johnston, 2018).

Ember cast: The process of embers/firebrands/flaming sparks being transported downwind beyond the main fire and starting new spot fires and/or igniting structures. Short-range ember cast is when embers are carried by surface winds and long-range ember cast is when embers are carried high into the convection column and fall out downwind beyond the main fire. The number of embers reaching an area decreases exponentially with distance traveled, and the likelihood of structure ignition increases with the number of embers landing on receptive fuels (Caton et al., 2016). The distance used to differentiate short-range and long-range ember cast varies among sources. NWCG (2018b) classifies short-range ember cast as embers that travel less than 0.25 miles and long-range ember cast as embers that travel more than 0.25 miles, whereas Beverly et al., (2010) use a threshold of 0.06 miles. The Beverly et al., (2010) definition is used in this CWPP.

Fire adapted community (FAC): A human community consisting of informed and prepared citizens collaboratively planning and taking action to safely coexist with wildland fire (NWCG, 2018b). There is not a checklist or one silver bullet to become a FAC; there are many strategic actions and tools that should be used together to reduce shared risk. Risk mitigation is the responsibility of everyone who lives and works in the community—residents, community groups, fire protection districts, agency partners, non-governmental organizations, etc. Fire adaptation is an ongoing process of collaborative action to identify risk, mitigate it, and maintain the work overtime.

Fire behavior: The way a fire reacts to the influences of fuel, weather, and topography. Characteristics of fire behavior include rate of spread, fire intensity, fire severity, and fire behavior category (NWCG, 2018b).

Fire history: A general term referring to the historic fire occurrence in a specific geographic area (NWCG, 2018b).

Fire intensity (aka, fireline intensity): (1) The product of the available heat of combustion per unit of ground and the rate of spread of the fire, interpreted as the heat released per unit of time for each unit length of fire edge, or (2) the rate of heat release per unit time per unit length of fire front (NWCG, 2018b).

Fire regime: Description of the patterns of fire occurrences, frequency, size, and severity in a specific geographic area or ecosystem. A fire regime is a generalization based on fire histories at individual sites. Fire regimes can often be described as cycles because some parts of the histories usually get repeated, and the repetitions can be counted and measured, such as fire return interval (NWCG, 2018b).

Fire severity. Degree to which a site has been altered or disrupted by fire; loosely, a product of fire intensity and residence time (NWCG, 2018b). Fire severity is determined by visually inspecting or measuring the effects that wildfire has on soil, plants, fuel, and watersheds. Fire severity is often classified as low-severity (less than 20% of overstory trees killed) and high severity (more than 70% of overstory trees kills). Moderate-severity or intermediate fire severity falls between these two extremes (Agee, 1996). Specific cutoffs for fire severity classifications differ among researchers. For example, Sheriff et al. (2014) define high-severity fires as those killing more than 80% of overstory trees.

Fire weather conditions: Weather conditions that influence fire ignition, behavior, and suppression, for example, wind speed, wind direction, temperature, relative humidity, and fuel moisture (NWCG, 2018b).

Firebreak: A natural or constructed barrier where all vegetation and organic matter have been removed down to bare mineral soil. Firebreaks are used to stop or slow wildfires or to provide a control line from which to work (Bennett et al., 2010; NWCG, 2018b).

Fireline: (1) The part of a containment or control line that is scraped or dug to mineral soil, or (2) the area within or adjacent to the perimeter of an uncontrolled wildfire of any size in which action is being taken to control fire (NWCG, 2018b).

Flame length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface). Flame length is measured on an angle when the flames are tilted due to effects of wind and slope. Flame length is an indicator of fire intensity (NWCG, 2018b).

FlamMap: A fire analysis desktop application that can simulate potential fire behavior and spread under constant environmental conditions (weather and fuel moisture) (Finney, 2006). FlamMap is one of the most common models used by land managers to assist with fuel treatment prioritization, and it is often used by fire behavior analysts during wildfire incidents.

Fuel model: A stylized set of fuel bed characteristics used as input for a variety of wildfire modeling applications to predict fire behavior (Scott and Burgan, 2005).

Fuel reduction: Manipulation, combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage from wildfires and resistance to control (NWCG, 2018b).

Fuelbreak: A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled. Fuelbreaks differ from firebreaks due to the continued presence of vegetation and organic soil. Trees in shaded fuelbreaks are thinned and pruned to reduce the fire potential but enough trees are retained to make a less favorable microclimate for surface fires (NWCG, 2018b).

Fuels mitigation / management: The act or practice of controlling flammability and reducing resistance to control of wildland fuels through mechanical, chemical, biological, or manual means, or by fire, in support of land management objectives (NWCG, 2018b).

Fuels: Any combustible material, most notably vegetation in the context of wildfires, but also including petroleum-based products, homes, and other man-made materials that might combust during a wildfire in the wildland-urban interface. Wildland fuels are described as 1-, 10-, 100-, and 1000-hour fuels. One-hour fuels are dead vegetation less than 0.25 inch in diameter (e.g., dead grass), ten-hour fuels are dead vegetation 0.25 inch to 1 inch in diameter (e.g., leaf litter and pine needles), one hundred-hour fuels are dead vegetation 1 inch to 3 inches in diameter (e.g., fine branches), and one thousand-hour fuels are dead vegetation 3 inches to 8 inches in diameter (e.g., large branches). Fuels with larger diameters have a smaller surface area to volume ratio and take more time to dry out or become wetter as relative humidity in the air changes (NWCG, 2018b).

Handcrews: A number of individuals that have been organized and trained and are supervised principally for operational assignments on an incident (NWCG, 2018b).

Handline: Fireline constructed with hand tools (NWCG, 2018b).

Hazards: Any real or potential condition that can cause injury, illness, or death of personnel, or damage to, or loss of equipment or property (NWCG, 2018b).

Home hardening: Steps taken to improve the chance of a home and other structures withstanding ignition by radiant and convective heat and direct contact with flames or embers. Home hardening involves reducing structure ignitability by changing building materials, installation techniques, and structural characteristics of a home (California Fire Safe Council, 2020). A home can never be made fireproof, but home hardening practices in conjunction with creating defensible space increases the chance that a home will stand strong during a wildfire.

Home ignition zone (HIZ): The characteristics of a home and its immediate surroundings within 100 feet of structures. Conditions in the HIZ principally determine home ignition potential from radiant heat, convective heat, and ember cast (NWCG, 2018b).

Ignition-resistant building materials: Materials that resist ignition or sustained flaming combustion. Materials designated ignition-resistant have passed a standard test that evaluates flame spread on the material (Quarles, 2019; Quarles and Pohl, 2018).

Incident Response Pocket Guide (IRPG): Document that establishes standards for wildland fire incident response. The guide provides critical information on operational engagement, risk management, all hazard response, and aviation management. It provides a collection of best practices that have evolved over time within the wildland fire service (NWCG, 2018a).

Indirect attack A method of suppression in which the control line is located some considerable distance away from the fire's active edge. Generally done in the case of a fast-spreading or high-intensity fire and to utilize natural or constructed firebreaks or fuelbreaks and favorable breaks in the topography. The intervening fuel is usually backfired; but occasionally the main fire is allowed to burn to the line, depending on conditions (NWCG, 2018b).

Insurance Services Office (ISO) rating: ISO ratings are provided to fire departments and insurance companies to reflect how prepared a community is for fires in terms of local fire department capacity, water supply, and other factors (see more information online at https://www.isomitigation.com/ppc/fsrs/).

Ladder fuels: Fuels that provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees with relative ease. Ladder fuels help initiate torching and crowning and assure the continuation of crowning. Ladder fuels can include small trees, brush, and lower limbs of large trees (NWCG, 2018b).

LANDFIRE: A national program spearheaded by the U.S. Department of the Interior and the U.S. Department of Agriculture to provide spatial products characterizing vegetation, fuels, fire regimes, and disturbances across the entire United States. LANDFIRE products serve as standardized inputs for fire behavior modeling. More information about the program is available online at https://www.landfire.gov/.

Lop-and-scatter: Cutting (lopping) branches, tops, and unwanted boles into shorter lengths and spreading that debris evenly over the ground such that resultant logging debris will lie close to the ground (NWCG, 2018b).

Mastication: A slash management technique that involves using a machine to grind, chop, or shred vegetation into small pieces that then become surface fuel (Jain et al., 2018).

Mitigation actions: Actions that are implemented to reduce or eliminate (mitigate) risks to persons, property, or natural resources. These actions can be undertaken before and during a wildfire. Actions before a fire include fuel treatments, vegetation modification in the home ignition zone, and structural changes to increase the chance a structure will stand strong during a wildfire (aka, home hardening). Mitigation actions during a wildfire include mechanical and physical tasks, specific fire applications, and limited suppression actions, such as constructing firelines and creating "black lines" through the use of controlled burnouts to limit fire spread and behavior (NWCG, 2018b).

Mosaic landscape: A heterogeneous area composed of different communities or a cluster of different ecosystems that are similar in function and origin in the landscape. It consists of 'patches' arranged in a 'matrix', where the patches are the different ecosystems and the matrix is how they are arranged over the land (Hansson et al., 1995).

National Wildfire Coordinating Group (NWCG): An operational group established in 1976 through a Memorandum of Understanding between the U.S. Department of Agriculture and Department of the Interior to

coordinate programs of the participating agencies to avoid wasteful duplication and to provide a means of constructively working together. NWCG provides a formalized system and agreed upon standards of training, equipment, aircraft, suppression priorities, and other operational areas. More information about NWCG is available online at https://www.nwcg.gov/.

Noncombustible building materials: Material of which no part will ignite or burn when subjected to fire or heat, even after exposure to moisture or the effects of age. Materials designated noncombustible have passed a standard test (Quarles, 2019; Quarles and Pohl, 2018).

Non-survivable road: Portions of roads adjacent to areas with predicted flame lengths greater than 8 feet under severe fire weather conditions. Potentially non-survivable flame lengths start at 8 feet according to the Haul Chart, which is a standard tool used by firefighters to relate flame lengths to tactical decisions (NWCG, 2019). Drivers stopped or trapped on these roadways would have a lower chance of surviving radiant heat from fires of this intensity. Non-survivable conditions are more common along roads that are lined with thick forests, particularly with trees that have limbs all the way to the ground and/or abundant saplings and seedlings.

Overstory: Layer of foliage in a forest canopy, particularly tall mature trees that rise above the shorter immature understory trees (USFS, 2021).

Passive crown fire: Fire that arises when surface fire ignites the crowns of trees or groups of trees (aka, torching). Torching trees reinforce the rate of spread, but passive crown fires travel along with surface fires (NWCG, 2018b).

Pile burning: Piling slash resulting from logging or fuel management activities into manageable piles that are subsequently burned during safe and approved burning conditions (NWCG, 2018b).

Potential operational delineations (PODs): PODs are topographic areas bounded by features suitable for fire control (e.g., ridgetops and roads) that can be used for proactive wildfire decision making and tactical operations during wildfire events. PODs can serve as management units for proactive ecological restoration and wildfire risk mitigation, as well as for cross-boundary and collaborative land and fire management planning (Thompson et al., 2022).

Radiation: A method of heat transfer by short-wavelength energy through air (aka, infrared radiation). Surfaces that absorb radiant heat warm up and radiate additional short-wavelength energy themselves. Radiant heat is what you feel when sitting in front of a fireplace. Radiant heat preheats and dries fuels adjacent to the fire, which initiates combustion by lowering the fuel's ignition temperature. The amount of radiant heat received by fuels increases as the fire front approaches. Radiant heat is a major concern for the safety of wildland firefighters and can ignite homes without direct flame contact.

Rate of spread: The relative activity of a fire in extending its horizontal dimensions. It is expressed as rate of increase of the total perimeter of the fire, as rate of forward spread of the fire front, or as rate of increase in area, depending on the intended use of the information. Rate of spread is usually expressed in chains or acres per hour for a specific period in the fire's history (NWCG, 2018b).

Ravine: Topographic feature created by streams cutting into unconsolidated materials. They are narrow, steep-sided, and commonly V-shaped. Ravines are steeper than draws (NRCS, 2017).

Remote Automatic Weather Stations (RAWS): A weather station that transmits weather observations via satellite to the Wildland Fire Management Information system (NWCG, 2018b).

Risk: (1) The chance of fires starting as determined by the presence and activity of causative agents (e.g., lightning), (2) a chance of suffering harm or loss, or (3) a causative agent (NWCG, 2018b).

Roadside fuel treatment: A natural or manmade change in fuel characteristics along a roadway which affects fire behavior so that fires burning into them can be more readily controlled, survivable conditions with shorter flame lengths are more likely during a wildfire, and firefighter access is enhanced (NWCG, 2018b).

Saddle: A low point on a ridge or interfluve, generally a divide or pass between the heads of streams flowing in opposite directions. The presence of a saddle funnels airflow and increases windspeed, thereby exacerbating fire behavior (NRCS, 2017).

Safety zones: An area cleared of flammable materials used by firefighters for escape in the event the line is outflanked or spot fires outside the control line render the line unsafe. In firing operations, crews progress so as to maintain a safety zone close at hand, allowing the fuels inside the control line to be consumed before going ahead. Safety zones may also be constructed as integral parts of fuelbreaks; they are greatly enlarged areas which can be used with relative safety by firefighters without the use of a fire shelter (NWCG, 2018b).

Shaded fuelbreak: Fuel treatments in timbered areas where the trees on the break are thinned and pruned to reduce fire potential yet enough trees are retained to make a less favorable microclimate for surface fires (NWCG, 2018b).

Slash: Debris resulting from natural events such as wind, fire, or snow breakage or from human activities such as road construction, logging, pruning, thinning, or brush cutting. Slash includes logs, bark, branches, stumps, treetops, and broken understory trees or brush (NWCG, 2018b).

Smoldering combustion: The combined processes of dehydration, pyrolysis, solid oxidation, and scattered flaming combustion and glowing combustion, which occur after the flaming combustion phase of a fire; often characterized by large amounts of smoke consisting mainly of tars (NWCG, 2018b).

Spot fire: Fire ignited outside the perimeter of the main fire by an ember (NWCG, 2018b). Spot fires are particularly concerning because they can form a new flaming front, move in unanticipated directions, trap firefighters between two fires, and require additional firefighting resources to control.

Spotting: Behavior of a fire producing sparks or embers that are carried by the wind and start new fires beyond the zone of direct ignition by the main fire (NWCG, 2018b).

Stand: An area of forest that possesses sufficient uniformity in species composition, age, size, structural configuration, and spatial arrangement to be distinguishable from adjacent areas (USFS, 2021).

Structure protection: The protection of homes or other structures from an active wildland fire (NWCG, 2018b).

Structure triage: The process of inspecting and classifying structures according to their defensibility or non-defensibility, based on fire behavior, location, construction, and adjacent fuels. Structure triage involves a rapid assessment of a dwelling and its immediate surroundings to determine its potential to escape damage by an approaching wildland fire. Triage factors include the fuels and vegetation in the yard and adjacent to the structure, roof environment, decking and siding materials, prevailing winds, topography, etc. (NWCG, 2018b). There are four categories used during structure triage: (1) defensible – prep and hold, (2) defensible – stand alone, (3) non-defensible – prep and leave, and (4) non-defensible – rescue drive-by. The most important feature differentiating defensible and non-defensible structures is the presence of an adequate safety zone for firefighters (NWCG 2018a). Firefighters conduct structure triage and identify defensible homes during wildfire incidents. Categorization of homes is not pre-determined; triage decisions depend on fire behavior and wind speed due to their influence on the size of safety zones needed to keep firefighters safer.

Suppression: The work and activity used to extinguish or limit wildland fire spread (NWCG, 2018b).

Surface fire: Fire that burns fuels on the ground, which include dead branches, leaves, and low vegetation (NWCG, 2018b).

Surface fuels: Fuels lying on or near the ground, consisting of leaf and needle litter, dead branch material, downed logs, bark, tree cones, and low stature living plants (NWCG, 2018b).

Task book: A document listing the performance requirements (competencies and behaviors) for a position in a format that allows for the evaluation of individual (trainee) performance to determine if an individual is qualified in the position. Successful performance of tasks, as observed and recorded by a qualified evaluator, will result in a recommendation to the trainee's home unit that the individual be certified in the position (NWCG, 2018b).

Torching: The burning of the foliage of a single tree or a small group of trees from the bottom up. Torching is the type of fire behavior that occurs during passive crown fires and can initiate active crown fires if tree canopies are close to each other (NWCG, 2018b).

Values at risk: Aspects of a community or natural area considered valuable by an individual or community that could be negatively impacted by a wildfire or wildfire operations. These values can vary by community and include diverse characteristics such as homes, specific structures, water supply, power grids, natural and cultural resources, community infrastructure, and other economic, environmental, and social values (NWCG, 2018b).

Watershed (aka, drainage basin or catchment): An area of land where all precipitation falling in that area drains to the same location in a creek, stream, or river. Smaller watersheds come together to create basins that drain into bays and oceans (NOAA, 2021).

Wildfire-resistant building materials: A general term used to describe a material and design feature that can reduce the vulnerability of a building to ignition from wind-blown embers or other wildfire exposures (Quarles, 2019; Quarles and Pohl, 2018).

Wildland-urban interface (WUI): Any area where the built environment meets wildfire-prone areas—places where wildland fire can move between natural vegetation and the built environment and result in negative impacts on the community (Mowry and Johnston, 2018).

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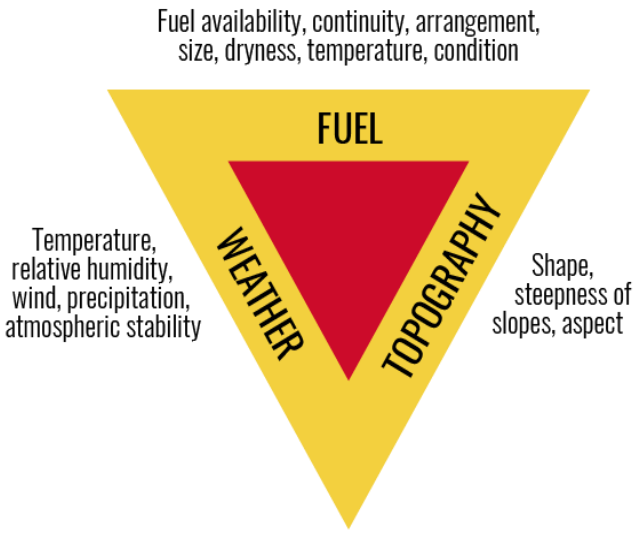
8. Appendix A. Introduction to Wildfire Behavior and Terminology

8.a. Fire Behavior Triangle

Complex interactions among wildland fuels, weather, and topography determine how wildfires behave and spread. These three factors make up the sides of the fire behavior triangle, and they are the variables that wildland firefighters pay attention to when assessing potential wildfire behavior during an incident (NWCG, 2019).



Interactions between fuels, weather, and topography dictate fire behavior. Source: California State University.

Fuels

Fuels include live vegetation such as trees, shrubs, shrubs, and grasses, dead vegetation like pine needles and cured grass, and materials like houses, sheds, fences, trash piles, and combustible chemicals.

Grasses and pine needles are known as "flashy" fuels because they easily combust and burn the fastest of all fuel types. If you think of a campfire, flashy fuels are the kindling that you use to start the fire. Flashy fuels dry out faster than other fuel types when relative humidity drops or when exposed to radiant and convective heat[3]. Fires in grassy fuel types can spread quickly across large areas, and fire behavior can change rapidly with changes in weather conditions.

Dead branches on the surface dry out slower than flashy fuels, release more radiant heat when they burn, and take longer to completely combust. The rate of spread is fast to moderate through shrublands depending on their moisture content, and long flame lengths can preclude direct attack by firefighters. Shrubs and small trees can also act as ladder fuels that carry fire from the ground up into the tree canopy.

Dead trees (aka, snags) and large downed logs are called "heavy fuels," and they take the longest to dry out when relative humidity drops and when exposed to radiant and convective heat. Heavy fuels release tremendous radiant heat when they burn, and they take longer to completely combust, just like a log on a campfire. Fire spread through a forest is slower than in a grassland or shrubland, but forest fires release more heat and can be extremely difficult and unsafe for firefighters to suppress. An abundance of dead trees killed by drought, insects, or disease can exacerbate fire behavior, particularly when dead trees still have dry, red needles (Moriarty et al., 2019; Parsons et al., 2014).

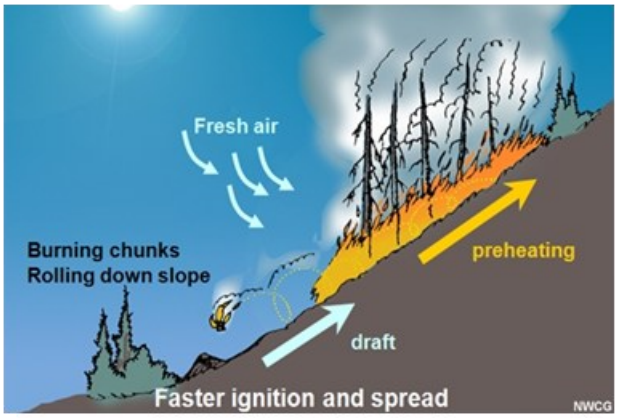
[3] Radiant heat transfer occurs by short-wavelength energy traveling through air. Radiant heat is what you feel when sitting in front of a fire. Radiant heat preheats and dries fuels adjacent to a wildfire, which initiates combustion by lowering the fuel's ignition temperature. Convective heat transfer occurs when air is heated, travels away from the source, and carries heat along with it. Convective heat is what you would feel if you put your hand in the air above an open flame. Air around and above a wildfire expands as it is heated, causing it to become less dense and rise into a hot convection column. Cooler air flows in to replace the rising gases, and in some cases, this inflow of air creates local winds that further fan the flames. Hot convective gases move up slope and dry out fuels ahead of the flaming front, lowering their ignition temperature and increasing their susceptibility to ignition and fire spread.

Topography

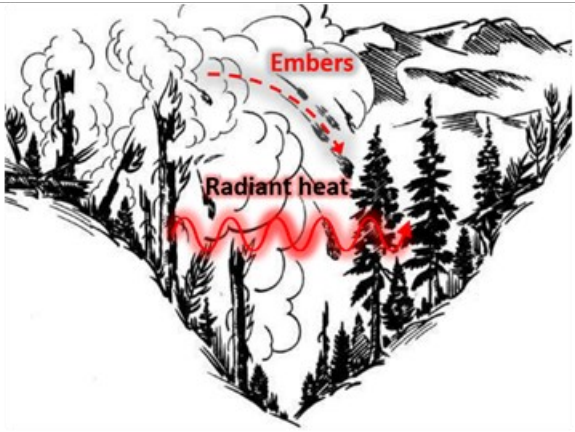
Topography (slope and aspect) influences fire intensity, speed, and spread. In the northern hemisphere, north-facing slopes experience less sun exposure during the day, resulting in higher fuel moistures. Tree density is often higher on north-facing slopes due to higher soil moisture. South-facing slopes experience more sun exposure and higher temperatures and are often covered in grasses and shrubs. The hotter and drier conditions on south-facing slopes mean fuels are drier and more susceptible to combustion, and the prevalence of flashy fuels results in fast rates of fire spread.

Fires burn more quickly up steep slopes due to radiant and convective heating. Fuels are brought into closer proximity with the progressing fire, causing them to dry out, preheat, and become more receptive to ignition, thereby increasing rates of spread. Steep slopes also increase the risk of burning material rolling and igniting unburnt fuels below.

Narrow canyons can experience increased combustion because radiant heat from a fire burning on one side of the canyon can heat fuel on the other side of the canyon. Embers can easily travel from one side of a canyon to the other. Topography also influences wind behavior and can make fire spread unpredictable. Wildfires burning through steep and rugged topography are harder to control due to reduced access for firefighters and more unpredictable and extreme fire behavior.



Slope increases fire spread through radiant and convective heating (source: NWCG).



Fires can easily cross narrow canyons (source: U.S. Forest Service).

Weather

Weather conditions impacting fire behavior include temperature, relative humidity, precipitation, wind speed, and wind direction. The National Weather Service uses a system called a red flag warning to indicate local weather conditions that can combine to produce increased risk of fire danger and behavior. Red flag warning days indicate an increased risk of extreme fire behavior due to a combination of hot temperatures, very low humidity, dry fuels, strong winds, and the presence of thunderstorms.

Direct sunlight and hot temperatures impact how ready fuels are to ignite. Warm air preheats fuels and brings them closer to their ignition point. When relative humidity is low, the dry air can absorb moisture from fuels, especially flashy fuels, making them more susceptible to ignition. Long periods of dry weather can dehydrate heavier fuels, including downed logs, increasing the risk of wildfires in areas with heavy fuel loads.

Wind influences fire behavior by drying out fuels (think how quickly your lips dry out in windy weather), increasing the amount of oxygen feeding the fuel, preheating vegetation through convective heat, and carrying embers more than a mile ahead of an active fire. Complex topography, such as chutes, saddles, and draws, can funnel winds in unpredictable directions, increasing wind speeds and resulting in erratic fire behavior.

8.b. Categories of Fire Behavior

Weather, topography, and fuels influence fire behavior, and fire behavior in turn influences the tactical options available for wildland firefighters and the risks posed to lives and property. Three general categories of fire behavior are described throughout this CWPP: surface fire, passive crown fire, and active crown fire.

- **Surface fire –** Fire that burns fuels on the ground, which include dead branches, leaves, and low vegetation. Surface fires can be addressed with direct attack using handcrews when flame lengths are less than four feet and with equipment when flame lengths are less than eight feet. Surface fires can emit significant radiant heat, which can ignite nearby vegetation and homes.
- **Passive crown fire –** Fire that arises when a surface fire ignites the crowns of trees or groups of trees (aka, torching). Torching trees reinforce the rate of spread, but passive crown fires travel along with surface fires. Firefighters can sometimes address passive crown fires with an indirect attack, such as dropping water or retardant out of aircraft or digging firelines at a safe distance from the flaming front. The likelihood of passive crown fire increases when trees have low limbs and when smaller trees and shrubs grow below tall trees and act as ladder fuels. Radiant heat and ember production from passive crown fires can threaten homes during wildfires.
- **Active crown fire –** Fire in which a solid flame develops in the crowns of trees and advances from tree crown to tree crown independently of surface fire spread. Crown fires are very difficult to contain, even with the use of aircraft dropping fire retardant, due to long flame lengths and the tremendous release of radiant energy. The likelihood of active crown fires increases when trees have interlocking canopies. Radiant heat and ember production from active crown fires can threaten homes during wildfires.

Passive and active crown fires can result in short- and long-range ember production that can create spot fires and ignite homes. Spot fires are particularly concerning because they can form a new flaming front, move in unanticipated directions, trap firefighters between two fires, and require additional firefighting resources to control. Crown fires are generally undesirable in the wildland-urban interface (WUI) because of the risk to lives and property; however, passive and active crown fires are part of the natural fire regime for some forest types and result in habitat for plant and animal species that require recently disturbed conditions (Keane et al., 2008; Pausas and Parr, 2018). Historically, passive and active crown fires occurred in some lodgepole pine forests and higher-elevation ponderosa pine and mixed-conifer forests on north-facing slopes (Addington et al., 2018; Romme, 1982).

8.c. Wildfire Threats to Homes

Wildfires can ignite homes through several pathways: radiant heat, convective heat, and direct contact with flames or embers. The ability for radiant heat to ignite a home is based on the properties of the structure (i.e., wood, metal, or brick siding), the temperature of the flame, the ambient air temperature, and the distance from the flame (Caton et al., 2016). Ignition from convective heat is more likely for homes built along steep slopes and in ravines and draws. For flames to ignite a structure, they must directly contact the building long enough to cause ignition. Flames from a stack of firewood near a home could cause ignition to the home, but flames that quickly burn through grassy fuels are less likely to ignite the home (although the potential still exists). Fires can also travel between structures along fuel pathways such as a fence or row of shrubs connecting a shed and a home (Maranghides et al., 2022). Some housing materials can burn hotter than the surrounding vegetation, thereby exacerbating wildfire intensity and initiating home-to-home ignition (Mell et al., 2010).

Homes built mid-slope and at the top of steep slopes and within ravines and draws are at greater risk of convective heat from wildfires. A wildfire could rapidly spread up this steep slope and threaten the home above. Photo credit: The Ember Alliance

Homes can be destroyed during wildfires even if surrounding vegetation has not burned. During many wildland fires, 50 to 90% of homes ignite due to embers rather than radiant heat or direct flame (Gropp, 2019; Johnston, 2018). Embers can ignite structures when they land on roofs, enter homes through exposed eaves, or get under wooden decks. Embers can also ignite nearby vegetation and other combustible fuels, which can subsequently ignite a home via radiant heating or direct flame contact. Burning homes can release embers that land on and ignite nearby structures, causing destructive home-to-home ignitions (Babrauskas, 2018; Gropp, 2019). Structural characteristics of a home can increase its exposure to embers and risk of combustion, such as wood shingle roofs and unenclosed eaves and vents (Hakes et al., 2017; Syphard and Keeley, 2019). Embers can also penetrate homes if windows are destroyed by radiant or convective heat.

8.d. Resources for More Information on Fire Behavior

- Introduction to Fire Behavior from the National Wildfire Coordinating Group (9:57 minute video)
- The Fire Triangle from the National Wildfire Coordinating Group (7:26 minute video)
- Understanding Fire Behavior in the Wildland/Urban Interface from the National Fire Protection Association (20:51 minute video)
- Understanding Fire from California State University (website)
- S-190 Introduction to Wildland Fire Behavior Course Materials from the NWCG (PowerPoints, handouts, and videos)

9. Appendix B. Community Risk Assessment and Modeling Methodology

9.a. Fire Behavior Analysis

Interpretations and Limitations

Fire behavior models have been rigorously developed and tested based on over 40 years of experimental and observational research (Sullivan, 2009). Fire behavior models allow us to identify areas that could experience high-severity wildfires and pose a risk to lives, property, and other values at risk.

Fire behavior analyses are useful for assessing relative risk across the entire County and are not intended to assess specific fire behavior in the vicinity of individual homes. It is not feasible to predict every combination of fire weather conditions, ignition locations, and suppression activities that might occur during a wildfire. Uncertainty regarding where a wildfire might ignite and how it will behave is inevitable until one is actually occurring. Even then, fire behavior can be erratic and unpredictable.

The 2026 CWPP for Coos County utilizes the 2023 Pacific Northwest Quantitative Wildfire Risk Assessment (2023 PNW QWRA) analyses facilitated and managed by Oregon State University in close partnership with Pyrologix, Washington Department of Natural Resources, U.S. Forest Service, and Bureau of Land Management (McEvoy et al., 2023). The 2023 PNW QWRA is an objective, science-based risk assessment used to support risk management and proactive wildfire planning and management, including CWPPs, across Oregon and Washington. The assessment uses state-of-the art fire behavior modeling conducted by Pyrologix LLC with the large-fire simulator (FSim) (Finney et al., 2011) and WildEST (Scott, 2020), which deploys a command-line version of FlamMap (Finney, 2006).

Fire behavior models like FSim and WildEST do not include structures as a fuel type. Structures like homes, sheds, fences, and other buildings are absolutely a source of fuel during wildland fires and can produce massive amounts of embers that contribute to home-to-home ignitions (Maranghides et al., 2022). FSim and WildEST cannot account for fine-scale variation in surface fuel loads, defensible space created by individual homeowners, and the ignitability of building materials, nor are these data available at the scale of individual homes across an entire fire protection district. In the absence of this information and a deeper quantitative understanding of interactions between structures and wildland vegetation during a wildfire, fire behavior cannot be modeled for areas dominated by homes in the same fashion as areas dominated by grassland, shrubland, or forest vegetation. For this reason, The Ember Alliance conducted a separate analysis to predict potential exposure of homes to radiant heat and ember cast (see section below).

Important Considerations about Fire Behavior Predictions

Fire behavior models can provide reasonable estimates of relative wildfire behavior across a landscape. However, wildfire behavior is complex, and models are a simplification of reality. Models also struggle to capture impacts of structures on wildfire spread and home-to-home ignitions. It is recommended to use the fire behavior analyses within this document to understand relative risk at a landscape scale, and not as an indication of a single property's risk.

Standard fire behavior models struggle to account for the exacerbating impact of flammable non-native plants such as gorse and Scotch broom on fire behavior, so fire behavior predictions in heavily infested areas is likely underestimated by the 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.

In addition, exceptionally hot, dry, and windy conditions are increasingly common due to climate change and could result in even more extreme fire behavior across Coos County than predicted by this analysis.

Maps of fire behavior predictions include areas indicated as "unburnable / not modeled". Parking lots, roadways, bodies of water, and barren areas are considered unburnable; areas dominated by homes and buildings were classified as "not modeled" because fire behavior models do not include structures as a fuel type (Scott and Burgan, 2005).

Model Specifications and Input

Fire behavior models require information on topography and fuel loads across the area of interest and fire weather conditions. For the 2023 PNW QWRA, Pyrologix, LLC mapped fuel conditions across Oregon and Washington representative of the 2022 fire season. They organized a workshop with dozens of wildland fire professionals to review and improve fuel data available from LANDFIRE. They modified fuel characteristics in areas that had experienced recent wildfires and fuel treatments to approximate post-disturbance conditions. Pyrologix, LLC developed custom fuel models to allow fire to propagate through agricultural and developed areas where experts thought fire spread was possible in these land use types. Fuel models are a stylized set of fuel bed characteristics used as input for a variety of wildfire modeling applications to predict fire behavior (Scott and Burgan, 2005). See additional details on development of fuel data for the 2023 PNW QWRA in McEvoy et al. (2023).

Fuel types are highly variable across Coos. Grass fuel models dominate the area along major rivers with agricultural land uses. Timber understory fuel models that are associated with lower-intensity wildfires located along the coast. A patchwork of the timber understory fuel model associated with greater fuel loads, grass-shrub fuel models, and timber litter fuel models cover the western portion of Coos County where differently aged Douglas-fir tree farms predominate (**Figure B.1**). The 2023 PNW QWRA was completed prior to the 2025 Moon Comple Fire, so post-fire conditions were not reflected in the analysis. **There are no fuel models that adequately account for the exacerbating impact of highly flammable non-native plants like gorse and Scotch broom on fire behavior, so potential fire behavior in heavily infested areas is likely underpredicted by the 2023 PNW QWRA.**

Pyrologix, LLC modeled fire behavior in WildEST and FSim under 10,000 simulated fire seasons for 23 fire occurrence areas across Washington and Oregon. Fire occurrence areas were delineated based on historic fire occurrence and observed fire weather characteristics. Coos County falls into one fire occurrence area (FOA 402). For each day of the 10,000 simulated fire seasons, FSim selects plausible weather scenarios based on historic data. A wildfire ignition is simulated if the energy release component (ERC) exceeds the 80th percentile of historic ERC values. Therefore, output from FSim represents potential fire behavior under high to extreme fire weather conditions. See additional details on fire weather conditions for the 2023 PNW QWRA in McEvoy et al. (2023).

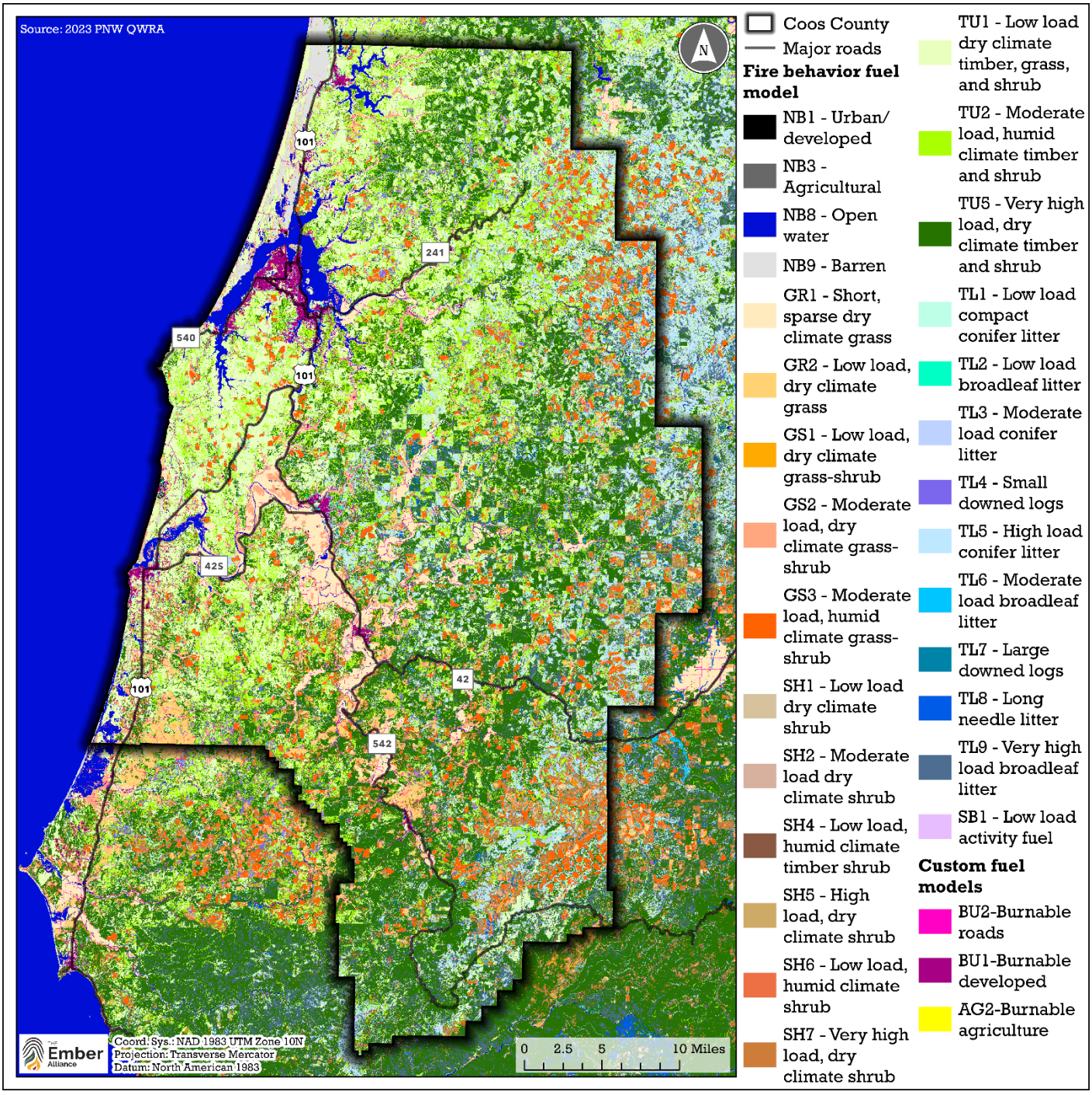


Figure B.1. *Fire behavior fuel models are an important input for making fire behavior predictions. See (Scott and Burgan, 2005) for a description of each fuel model and (McEvoy et al., 2023) for methods used to map surface fuels for the 2023 PNW QWRA. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

Predicted Fire Behavior

Conditional Flame Length

Flame length is the distance measured from the average flame tip to the middle of the flaming zone at the base of the fire. Flame length is measured at an angle when the flames are tilted due to effects of wind and slope (see image at right). Flame length is an indicator of fire intensity—the amount of energy released by a fire.

Conditional flame length from the 2023 PNW QWRA is the average flame length experienced at a location across all simulated wildfires that reached that location. Conditional flame length is calculated by multiplying the conditional probability of flame lengths falling in each of six fire intensity levels (0-2 feet, 2-4 feet, 4-6 feet, 6-8 feet, 8-12 feet, and >12 feet) by the midpoint flame length for each class. For the flame length class of >12 feet, a flame length midpoint of 100 feet was used to represent torching trees. **Figure B.2** shows conditional flame lengths across Coos County.

Conditional Probability of Flame Lengths Exceeding 8 Feet

Conditional probability of flame lengths exceeding 8 feet is the probability that flame lengths exceed the threshold beyond which firefighters can safely engage with a wildfire at the flaming front (**Table B.1**). Conditional probability of flame lengths exceeding 8 feet in Coos County was determined by adding together the conditional probability for the 8-12 feet and >12 feet fire intensity levels from the 2023 PNW QWRA (**Figure B.3**).

Most Likely Fire Type

Each location on the landscape is described by the most likely type of fire behavior it could experience based on all simulated wildfires that reached that location. Fire types for the 2023 PNW QWRA are surface fire (no forest canopy present), underburn (surface fire where forest canopy is present), low-grade passive crown fire (0-25% crown fraction burned), mid-grade passive crown fire (>25-60% crown fraction burned), high-grade passive crown fire (>60-90% crown fraction burned), and active crown fire (>90%). WildEST produces a probability of each type of fire occurring at a given location, and The Ember Alliance determined the type of fire with the greatest probability of occurring at each location in Coos County using output from the 2023 PNW QWRA (**Figure B.4**). The probability an area experiences a high-grade passive crown fire or active crown fire is shown in **Figure B.5**.

Fire Behavior Class

Wildland firefighters pay attention to current and expected fire behavior when making tactical decisions. Fire behavior classes are based on flame length, rate of spread, and crown fire activity and are utilized by firefighters to guide tactical decisions following the Haul Chart (**Table B.1**). The Ember Alliance combined estimates of flame length and fire type from the 2023 PNW QWRA to produce a map of fire behavior class across Coos County (**Figure B.6**).

Under hot, dry, and windy weather, 35% percent of Coos County could experience high to extreme fire behavior, including ember production that ignites additional fires away from the main fire and the movement of high-intensity fire from treetop to treetop. Such fires are extremely challenging if not impossible to control until winds die down and fuel moisture increases. High-intensity wildfires and active crown fires are most likely in the eastern part of Coos County where summer temperatures are hotter and conditions are drier.

Burn Probability

Burn probability is the annual likelihood of wildfire at a given location. Fuels, topography, and wind affect burn probability by dictating how fire spreads across the landscape. Modelers for the 2023 PNW QWRA divided the number of fire perimeters that burned each location by the total number of simulated fires from FSim to determine the burn probability.

Most of Coos County has a low to moderate probability relative to the state of Oregon according to the 2023 PNW QWRA, largely due to the cooler and moister conditions that predominate most years (**Figure B.7**). However, during a particularly hot, dry, and windy day in Coos County—especially a day with winds blowing out the east—there is abundant vegetation on steep slopes that could support a large wildfire.

Conditional and Expected Net Value Change

Conditional net value change (cNVC) and expected net value change (eNVC) are quantitative assessments of wildfire risk to highly valued resources and assets (HVRAs) at each location of a landscape based on potential fire intensity and the exposure, relative importance, and sensitivity of values at risk to different types of fire behavior. Expected net value change also factors in likelihood of wildfire (i.e., burn probability) whereas cNVC assesses risk in each location assuming a fire were to occur in that location, regardless of how likely a fire. Conditional and expected net value change are positive where the overall impact of wildfire is expected to benefit HVRAs present at a location, and cNVC and eNVC are negative where the overall impact is expected to degrade HVRAs. Conditional net value change is calculated by multiplying flame length probability for each flame length class by the potential impact of each flame length class on each HVRA (positive or negative impact) by the relative importance of each HVRA. Expected net value change is cNVC multiplied by the burn probability at each location.

Various subject matter experts from different universities, state agencies, and federal agencies collaboratively identified which HVRAs to include in the 2023 PNW QWRA, selected the relative importance of HVRAs, and defined the sensitivity of each HVRA to different types of fire behavior (also known as response functions). Categories of HVRAs were people and property (35% relative importance), drinking water (18%), infrastructure (16%), timber (12%), ecological integrity (11%), wildlife habitat (7%), agriculture (1%), and recreation infrastructure (<1%). Maps of and response functions for HVRAs are provided throughout McEvoy et al. (2023), and appendix A of McEvoy et al. (2023) lists sub-HVRAs.

According to the 2023 PNW QWRA, wildfire and/or broadcast prescribed burning could moderately benefit portions of Coos County by restoring ecological conditions and reducing fuel loads. Beneficial fire is more likely in areas without homes and where expected fire behavior is moderate (**Figure B.8**; **Figure B.9**). Values for eNVC are less extreme than for cNVC because burn probability is relative low across most of Coos County, and eNVC factors in burn probability whereas cNVC does not.

Table B.1. *Description of fire behavior and tactical interpretations for firefighters from the Haul Chart (NWCG, 2019).*

Fire behavior class	Flame length (feet)	Rate of spread (chains/hr)*	Tactical interpretation
Very low, smoldering	<1	0-2	Fire is not spreading and has limited flaming. Fire can be attacked at the head or flanks by persons using handtools. Handline will hold the fire.
Low, creeping, spreading	1-4	2-5	Fire can be attacked at the head or flanks by persons using handtools. Handline should hold the fire.
Moderate, running	4-8	5-20	Fires are too intense for direct attack on the head of the fire by persons using handtools. Handline cannot be relied on to hold fire. Equipment such as dozers, engines, and retardant aircraft may be effective.
High, torching and spotting	8-11	20-50	Fires present serious control problems with torching, crowning, and spotting. Control efforts at the head of the fire are probably ineffective.
Very high, active crown fire	11-25	50-150	Crowning, spotting, and major fire runs are expected. Control efforts at the head of the fire are ineffective.
Extreme and erratic	>25	>150	Extreme intensity, turbulent fire, and chaotic spread. Escape to safety should be considered.

*__Note:__ 1 chain = 66 feet. Chains are commonly used in forestry and fire management as a measure of distance. 1 chain / hour = 1.1 feet / minute.

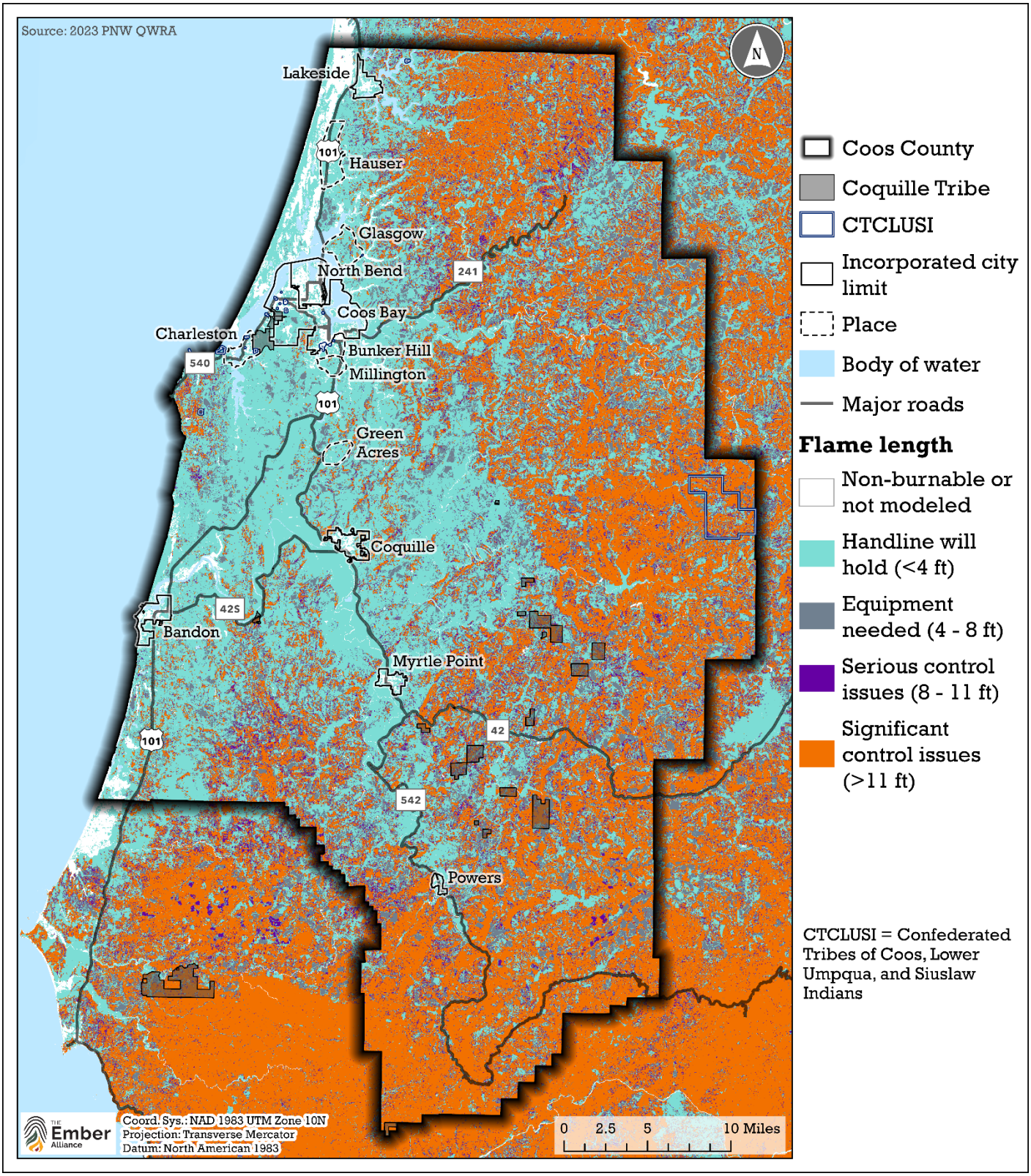


Figure B.2. *Conditional flame lengths in Coos County under high to extreme fire weather conditions, categorized by the Haul Chart (**Table B.1**). Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

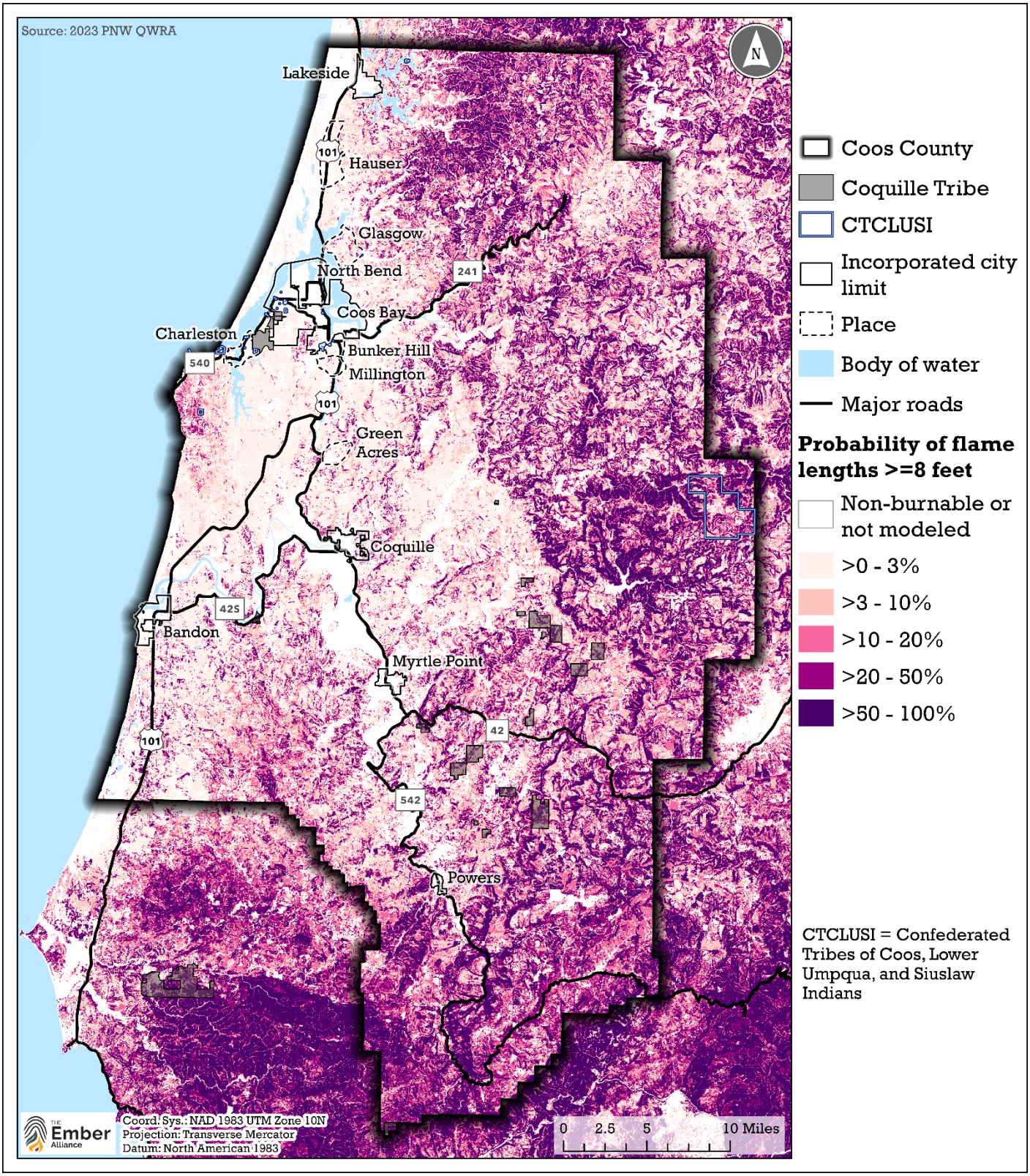


Figure B.3. *Conditional probability of flame lengths exceeding 8 feet in Coos County under high to extreme fire weather conditions. Firefighters can no longer safely engage a wildfire at the flaming front when flame lengths exceed 8 feet (**Table B.1**). Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

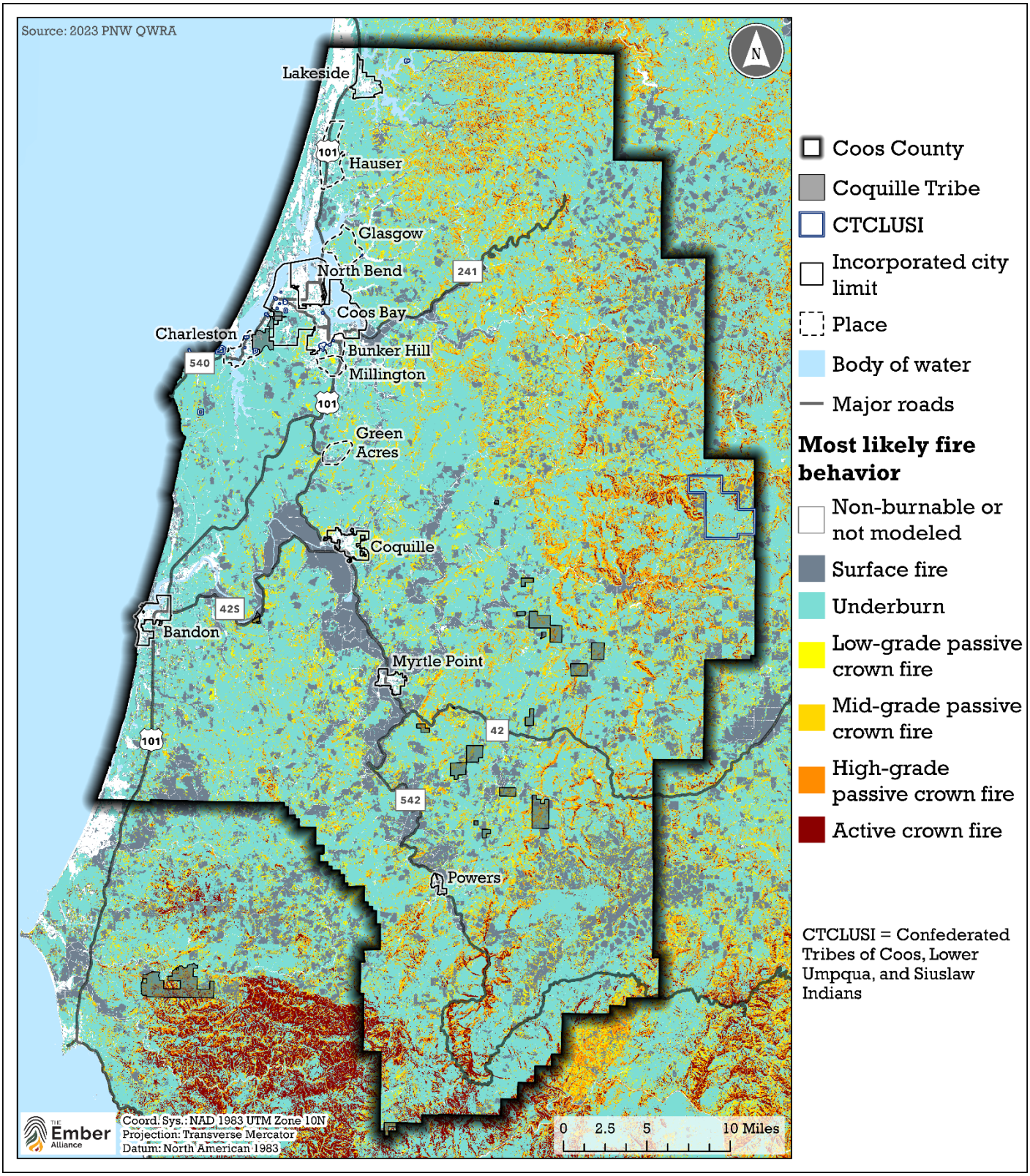


Figure B.4. *Most likely fire type across Coos County under high to extreme fire weather conditions. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

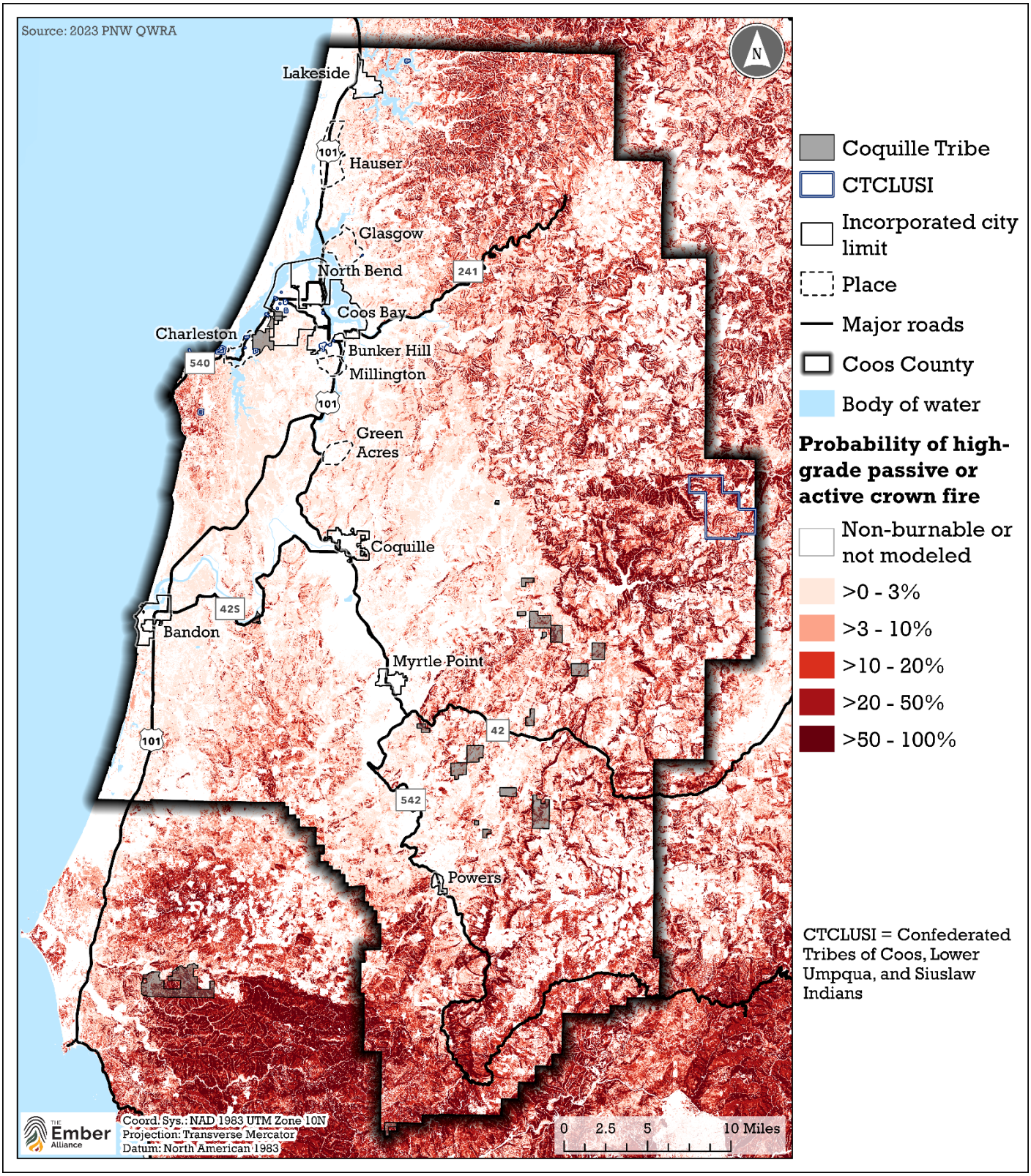


Figure B.5. *Probability of high-grade or active crown fire across Coos County under high to extreme fire weather conditions. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

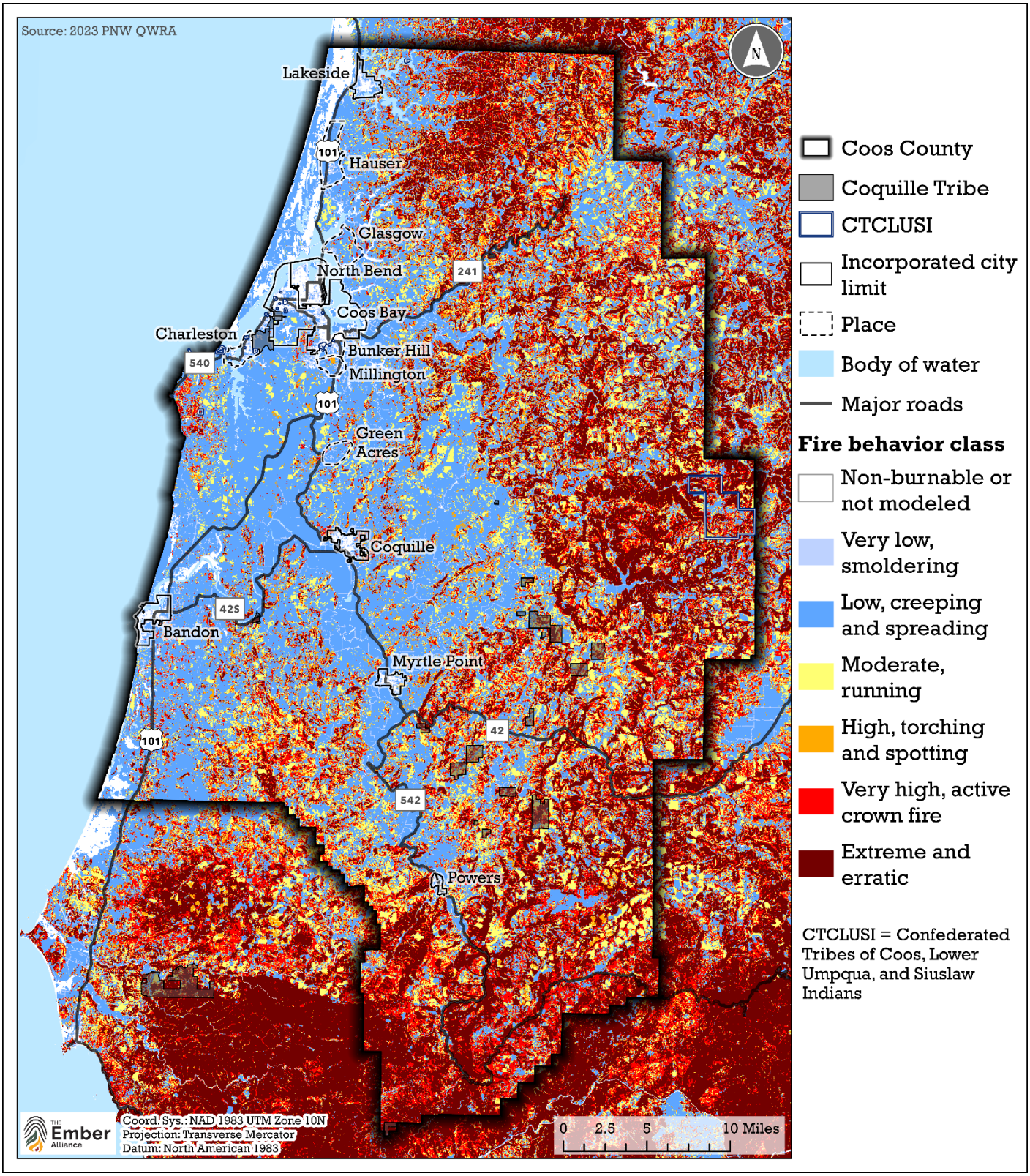


Figure B.6. *Under high to extreme fire weather conditions ranging from hot, dry, and windy to extremely hot, dry, and windy, 35% percent of Coos County could experience high to extreme fire behavior. Fire behavior classes come from the Haul Chart (**Table B.1**). Source: Analysis by The Ember Alliance using data from the 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

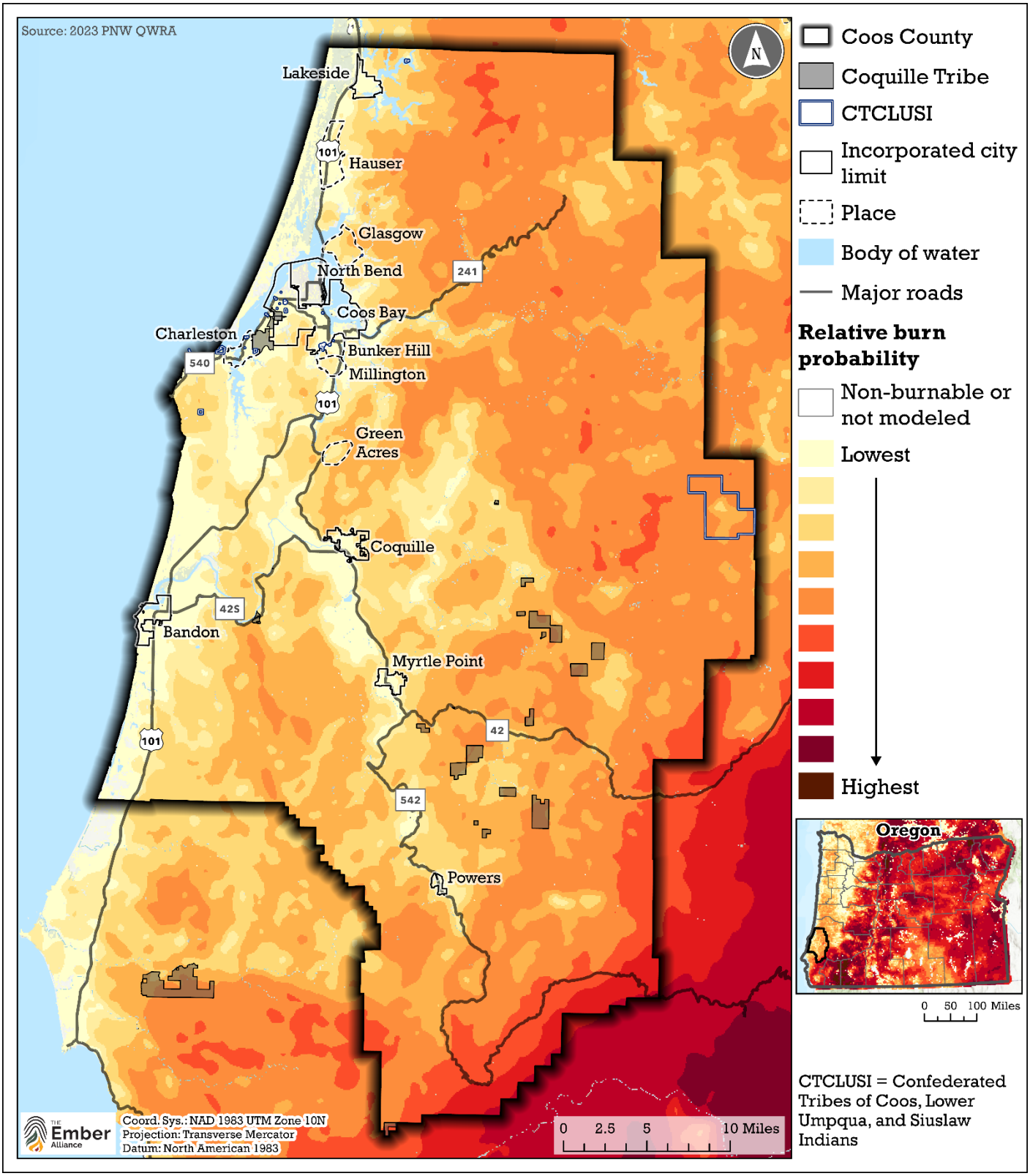


Figure B.7. *Most of Coos County has low to moderate burn probability relative to the state of Oregon. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

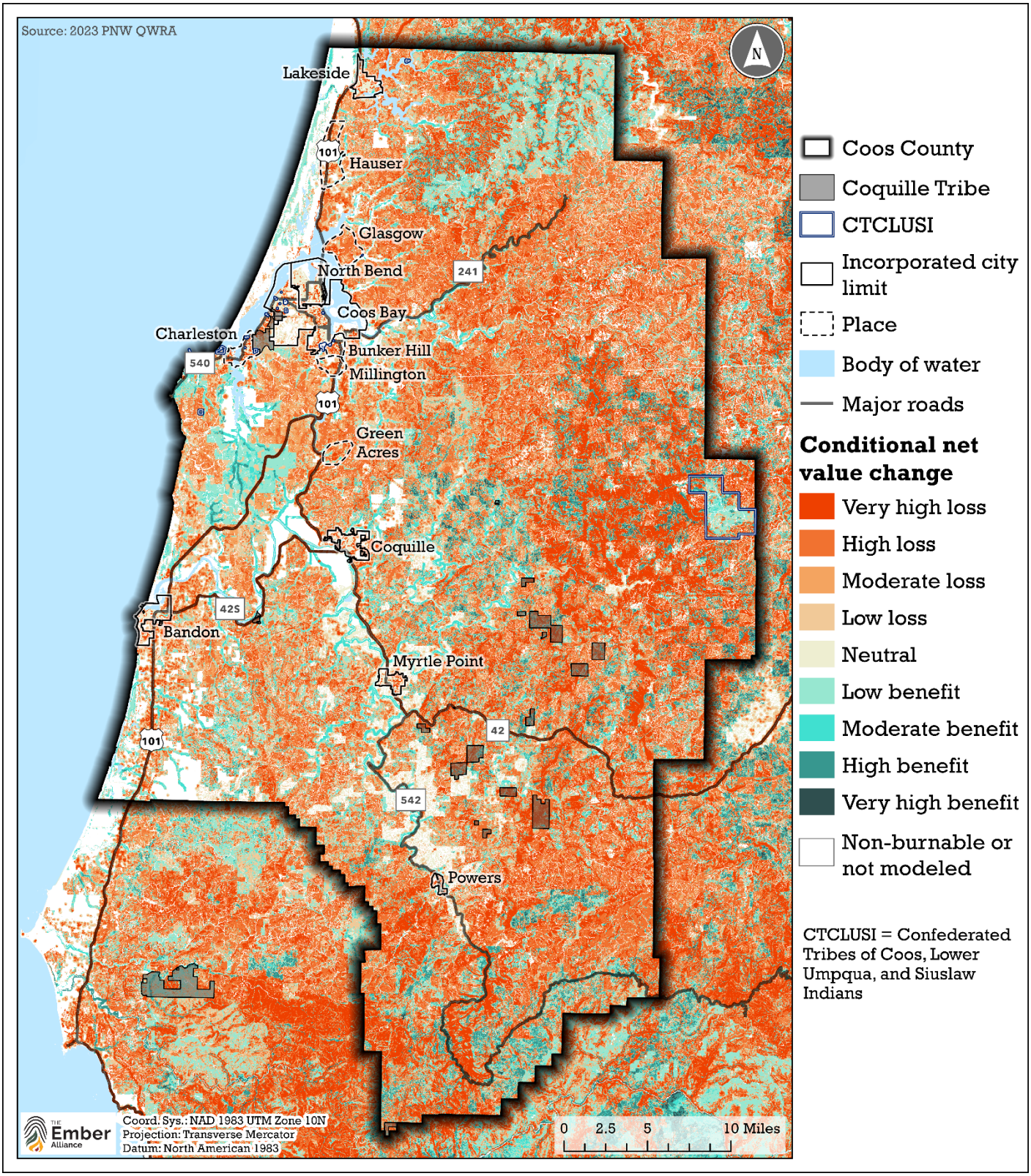


Figure B.8. *Conditional net value change across Coos County. This assessment shows that wildfire could moderately benefit portions of Coos County by restoring ecological conditions and reducing fuel loads, especially in areas without homes and where expected fire behavior is moderate. Wildfires can create diverse conditions on the landscape, improve habitat for some wildlife species, and reduce the potential for damaging wildfire in the coming years. Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

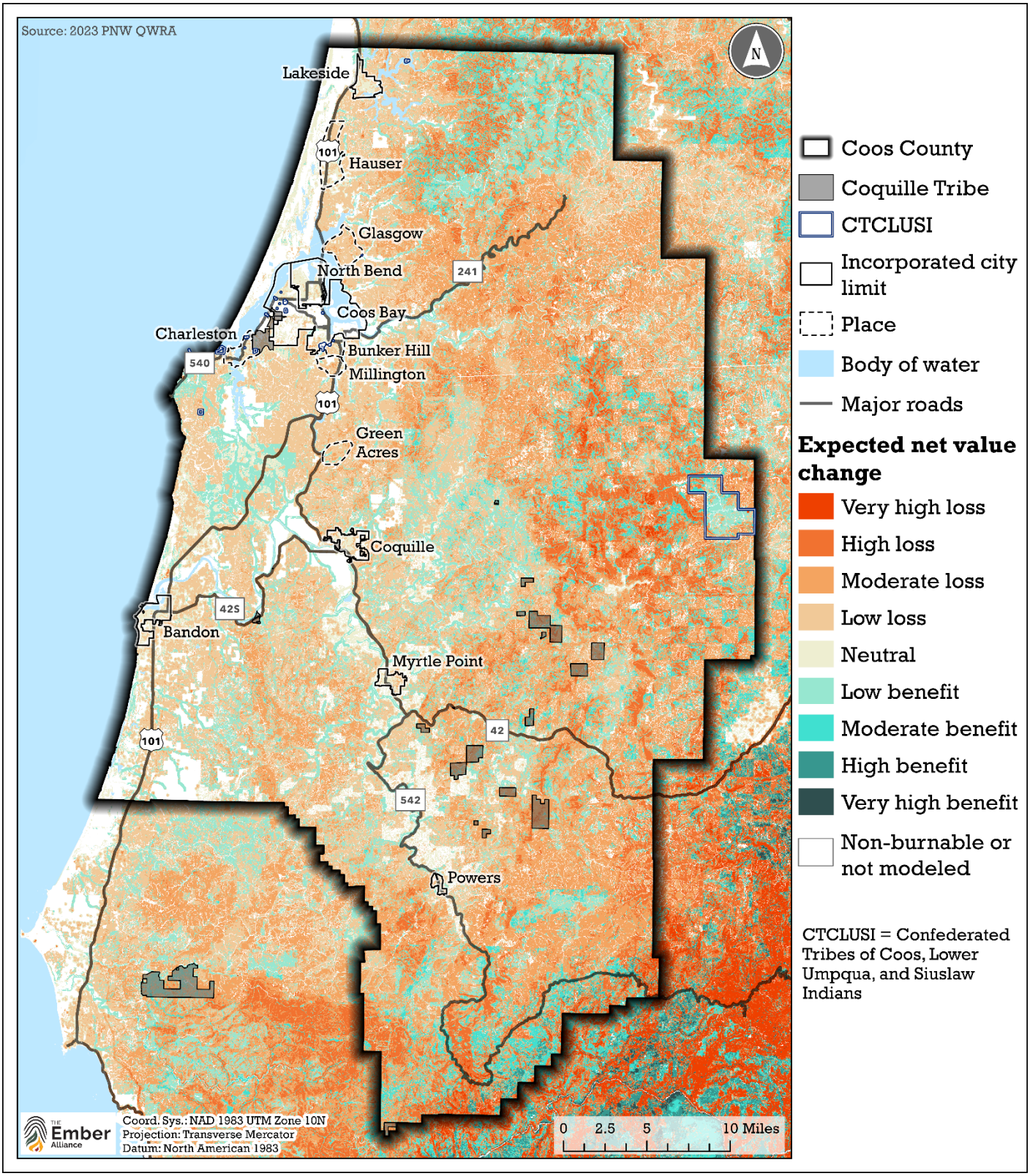


Figure B.9. *Expected net value change is conditional net value change multiplied by burn probability. This assessment shows that wildfire could moderately benefit portions of Coos County by restoring ecological conditions and reducing fuel loads, especially in areas without homes and where expected fire behavior is moderate. Potential losses are higher to the southeast of Coos County due to higher burn probabilities in this area (**Figure B.7**). Source: 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

9.b. Predicted Radiant Heat and Ember Cast Exposure

The Ember Alliance assessed the risk that radiant heat and long-range ember cast pose to structures. Radiant heat from burning vegetation can ignite nearby homes, and embers emitted from burning vegetation or other homes can travel long distances and ignite vegetation and homes away from the main fire. This analysis is useful for comparing relative exposure across the entire county and not for evaluating absolute risk to individual homes. Fire behavior outputs from the 2023 PNW QWRA cannot account for defensible space, the fire resistance of materials used in home construction, and other fine-scale variation in fuel loads that contribute to the ignition potential of individual homes.

Ember production and transport and their ability to ignite recipient fuels are guided by complex processes structure (Caton et al., 2016), so The Ember Alliance utilized research by Beverly et al., (2010) and (Caggiano et al., 2020) for simplified predictions of exposure to flame impingement, radiant heating, and long-range ember cast. Exposure is based on distance from long flame lengths and torching trees assuming:

Embers can ignite homes even when the flaming front of a wildfire is far away. See Section 3.a. Mitigate the Home Ignition Zone for tangible and relatively simple steps you can take to harden your home against embers. Mitigation practices, such as removing pine needles from gutters and installing covers over vents, can make ignition less likely and make it easier for firefighters to defend your property.

- Radiant heat can ignite homes when extreme fire behavior (flame lengths > 8 feet) occurs within 33 yards (30 meters) of structures. Research summarized by (Abo El Ezz et al., 2022) suggest that 75% of structures are destroyed when exposed to >8-foot flame lengths during actual wildfires.
- Short-range embers can ignite homes within about 110 yards (100 meters) of active crown fires. The distance cutoff for short-range comes from Beverly et al. (2010). Caggiano et al., (2020) also found that a vast majority (95%) of home losses during WUI fires occurred within 100 m of wildland vegetation.
- Long-range embers can reach homes within 930 yards (850 meters) of high-grade passive crown fire or active crown fires. (Caggiano et al., 2020) found that homes were lost as far as 850 meters from the flaming front during WUI fires.

Conditional flame lengths from the 2023 PNW QWRA were used to assess radiant heat exposure under high fire weather conditions (**Figure B.2**), and areas with >3% probability of flame lengths exceeding 8 feet were included to assess radiant heat exposure under extreme fire weather conditions (i.e., 97th percentile fire weather conditions) (**Figure B.3**). Areas where the most likely fire type was high-grade passive or active crown fires were used to asses short- and long-range ember cast under high fire weather conditions, (**Figure B.4**), and areas with >3% probability of high-grade passive or active crown fires were included to assess short- and long-range ember cast under extreme fire weather conditions (**Figure B.5**). Exposure to radiant heat and/or ember cast across Coos County under high and extreme fire weather is shown in **Figure B.10**.

Under high fire weather conditions, 30% of primary structures[4] in Coos County could be exposed to radiant heat and/or ember cast, and this percent rises to 82% under extreme fire weather conditions (**Figure 2.f.8**; **Figure 2.f.9**). Potential exposure of homes to radiant heat and/or ember cast is particularly high in Allegany, Bridge RFPD, Dora-Sitkum RFPD, Powers FD, the outskirts of Powers, along Daniels Creek and S Coos River Lane, and along Seven Devils Road. Fuel treatments in Coos County, mitigation around the HIZs for all structures, and upgrading to more flame-resistant building materials can reduce the exposure of homes to radiant heat and ember cast.

[4] Structure footprints from the State of Oregon GeoHub did not differentiate primary structures from secondary structures (e.g., sheds and garages), so an assumption was made that any structure with a footprint <430 ft^2 was a secondary structure, unless it was the only structure on the parcel. This size threshold was determined by The Ember Alliance using aerial imagery to compare the sizes of known primary structures and secondary structures and the sizes of manufactured home parks across Coos County.

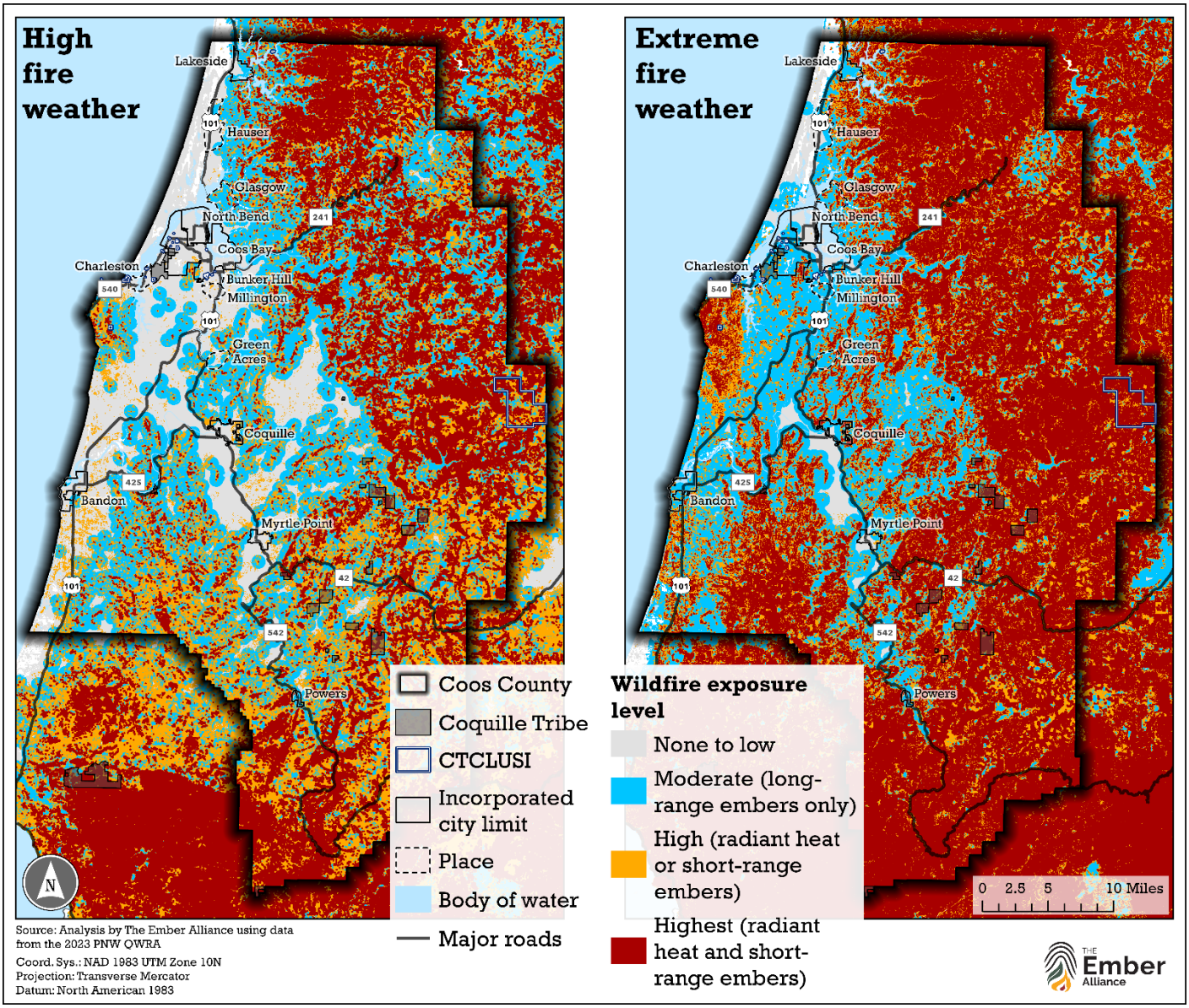


Figure B.10. *Predicted exposure to radiant heat, short-range ember cast, and/or long-range ember cast under high or extreme fire weather conditions in Coos County. Source: Analysis by The Ember Alliance using data from the 2023 Pacific Northwest Quantitative Wildfire Risk Assessment.*

9.c. WUI Delineation

Delineating the wildland-urban interface is a critical component of CWPPs in compliance with the Healthy Forest Restoration Act (HFRA) of 2003. Communities can extend the WUI boundary into adjacent areas that pose a wildfire threat to their community, that can serve as a strategic location for wildland firefighting, and that are adjacent to evacuation routes for the community (HFRA 4 U.S.C. §101.16). Strategic wildfire mitigation across the WUI can increase the safety of residents and wildland firefighters and reduce the chances of home loss.

The WUI for the 2026 Coos County CWPP includes any 200-acre area with at least primary structures that could experience exposure to radiant heat, long-range embers, or short-range embers. The WUI also includes the land surrounding Upper Pony Creek Reservoir which is critical to the provisioning of clean surface drinking water (**Figure 2.c.2**). The WUI was further defined by the potential for home-to-home exposure, which was based the distance between structures (primary and secondary structure) and density of primary structures following the approach outlined by the National Institute of Standards and Technology (Maranghides et al., 2022) (**Table B.2**). Almost half of structures in Coos County that could be exposed to wildfire also have a high potential for structure-to-structure ignitions and 27% have a moderate potential for structure-to-structure ignitions, especially if structures are not mitigated or hardened (**Table B.2**; **Figure B.11**).

The WUI defined for this CWPP is similar to that created for the entire country by (Carlson et al., 2022) despite differences in methodology (**Figure B.12**). This overlap provides additional justification to the WUI created for this CPWP. Carlson et al. (2022) follows the WUI definition utilized by the U.S. Forest Service for nation-wide WUI mapping, but they utilized individual structure footprints instead of relying on structure density from Census blocks. Key differences between the WUI from this CWPP and that from Carlson et al. (2022) is inclusion of the area around Upper Pony Creek Reservoir and northern North Bend around the airport and the exclusion of structures along the Oregon Coast Highway around Coos Bay.

There is currently no formal statewide WUI for Oregon after State Bill 83 was passed in 2025, which voided the WUI and wildfire hazard zone maps created by the Oregon Department of Forestry. Coos County could potentially use the WUI delineated for this CWPP for deciding where to apply defensible space guidelines. However, there is currently no WUI code in the county.

Table B.2. *Wildland urban interface (WUI) density categories and potential for structure-to-structure ignitions based on research from the National Institute of Standards and Technology (Maranghides et al., 2022).*

WUI density category	Structure separation distance[1]	Structure density[2]	Potential fire exposure from burning neighboring structure	Percent of structures in Coos County[3]
High density	<30 feet	>2 structures/acre	High	49%
Medium density	30 to <100 feet	1-2 structures/acre	Moderate	27%
Low density	≥100 feet	<1 structure/acre	Low	24%

[1] Structure separation distance was calculated using all structure footprints from the state of Oregon GeoHub. Garages, sheds, and other auxiliary structures pose a risk to primary structures if they ignite. Average separation distance was then calculated for each 200-acre area.

[2] Structure density was determined for primary structures only. Any structure with a footprint <430 ft^2 was assumed to be a secondary structure, unless it was the only structure on the parcel. Structure density was determined in a 100-meter radius area around each structure following Carlson et al. (2022). Average structure density was then calculated for each 200-acre area.

[3] Only structures that could experience exposure to radiant heat and/or ember cast were included in the analysis.

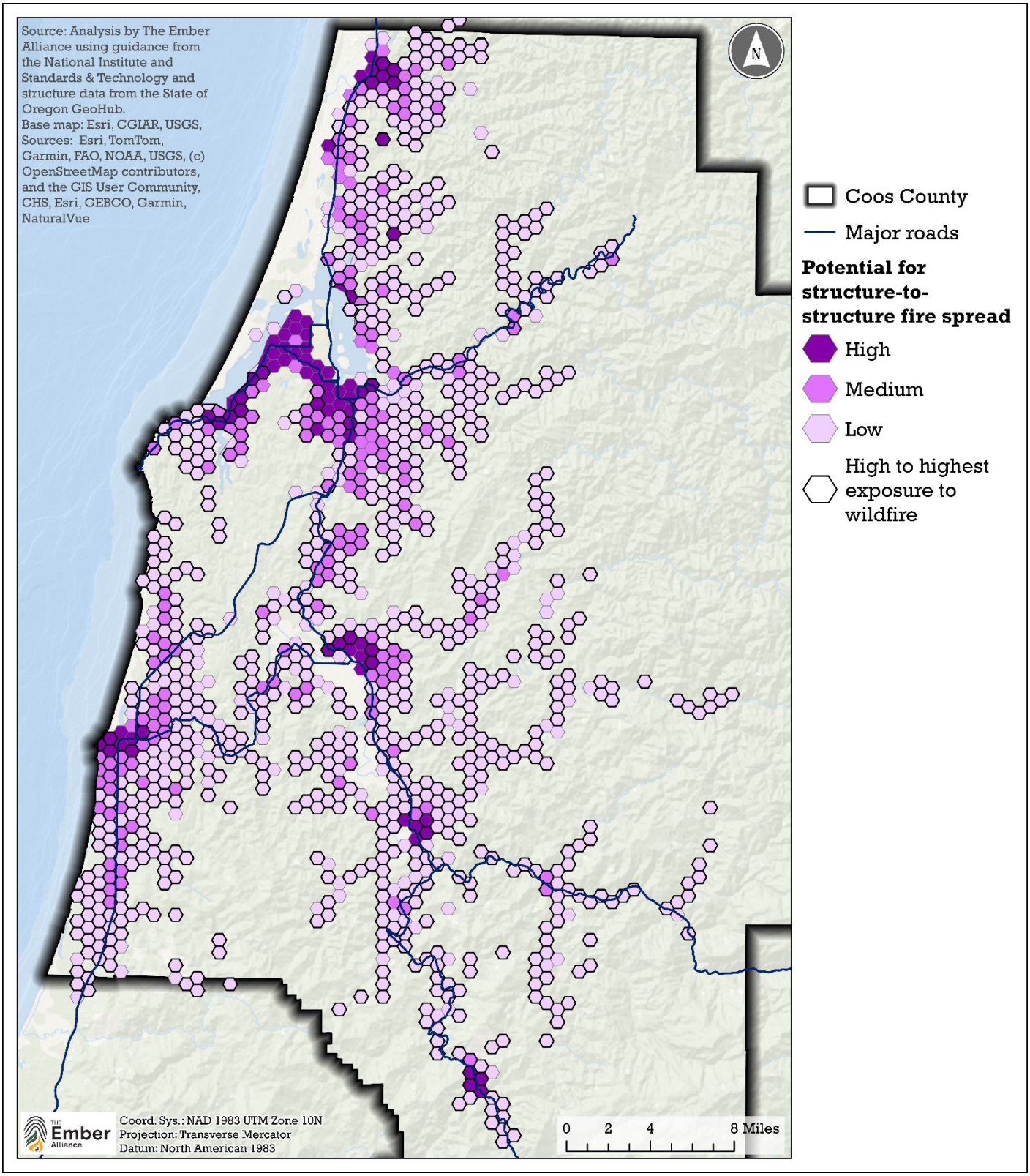


Figure B.11. *Almost half of structures in Coos County that could be exposed to wildfire also have a high potential for structure-to-structure ignitions and 27% have a moderate potential for structure-to-structure ignitions. Areas with "high to highest exposure to wildfire" are those that could experience radiant heat and/or short-range ember cast. Analysis by The Ember Alliance following guidance from the National Institutes of Standards and Technology (**Table B.2**) and using structure footprints from the State of Oregon GeoHub.*

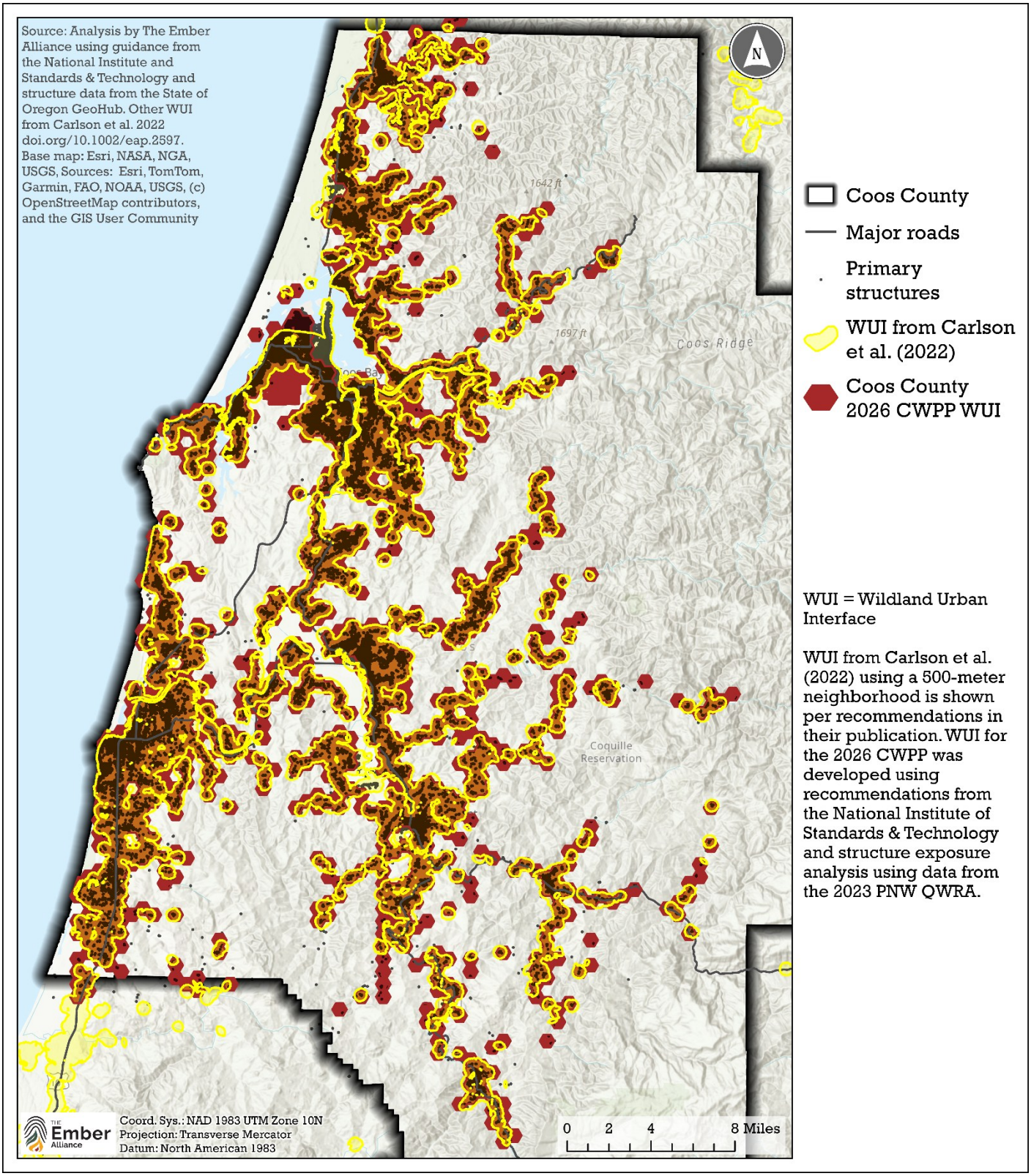


Figure B.12. *Comparison of WUI created for the 2026 Coos County CWPP and WUI delineated for the entire county by (Carlson et al., 2022). The two WUI boundaries show strong alignment despite using different methodology.*

9.d. Exposure of Community Lifelines

The Ember Alliance identified community lifelines in areas that could experience damaging radiant heat and/or long-range ember cast to inform project prioritization for the CWPP (**Table B.3**; **Figure B.13**). Based on this analysis, one of the first-priority projects for the 2026 Coos County CWPP is mitigation around communication towers. Locations of communication towers and hazardous material were redacted from public-facing maps for security purposes, but this information was shared with the Coos County CWPP Steering Committee.

Keep in mind that fire behavior analyses from the 2023 PNW QWRA at the scale of 0.2 acres (30 x 30 meters), and input fuel data is developed via extrapolation of aerial imagery and satellite data. **Site-level assessments are vital to verify exposure of community lifelines and develop specific plans for mitigation.** Several community lifelines were not predicted for exposure to wildfire but were still prioritized for treatments in this CWPP because of on-the-ground knowledge of potential hazards.

Table B.3. *Community lifelines with potential exposed to radiant heat and/or short-range ember cast under high fire weather or only under extreme fire weather. Lifelines are organized by FEMA categories. Tribal infrastructure and other community values, such as recreation infrastructure, were also included.*

Community Lifeline: Component / Subcomponent	Name	Exposure to radiant heat and/or short-range embers
FEMA Lifeline: Food, Hydration, Shelter		
Shelter / Housing	Bandon By the Sea RV	Under high fire weather
Shelter / Housing	Bandon Pines	Under high fire weather
Shelter / Housing	Robbin's Nest Residential Park	Under high fire weather
Shelter / Housing	Beach Loop RV Park	Only under extreme fire weather
Shelter / Housing	North Bayside Trailer Courts	Only under extreme fire weather
Shelter / Housing	West Manor Mobile Home Park	Only under extreme fire weather
FEMA Lifeline: Health and Medical		
Fatality management / Cemetery	Brack Cemetery	Under high fire weather
Fatality management / Cemetery	Dement Cemetery	Under high fire weather
Fatality management / Cemetery	Garrett Cemetery	Under high fire weather
Fatality management / Cemetery	Hayes Cemetery	Under high fire weather
Fatality management / Cemetery	Hermann Family Cemetery	Under high fire weather
Fatality management / Cemetery	Hultin Thrush Cemetery	Under high fire weather
Fatality management / Cemetery	Powers Cemetery	Under high fire weather
Fatality management / Cemetery	Robison - Lower Fishtrap Cemetery	Under high fire weather
Fatality management / Cemetery	Templeton Cemetery	Under high fire weather
Fatality management / Cemetery	Allegany Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Catching Creek Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Enchanted Prairie Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Fetter Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Lakeside Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Morris Family Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Parkersburg Cemetery	Only under extreme fire weather
Fatality management / Cemetery	South Slough Cemetery	Only under extreme fire weather
Fatality management / Cemetery	Waterman Cemetery	Only under extreme fire weather
FEMA Lifeline: Safety and Security		
Fire service / Fire lookout	Eden Ridge	Under high fire weather

Community Lifeline: Component / Subcomponent	Name	Exposure to radiant heat and/or short-range embers
Fire service / Fire lookout	Hood Mountain	Under high fire weather
Fire service / Fire lookout	Signal Tree	Under high fire weather
School / School	Powers Junior / Senior High School	Under high fire weather
Fire service / Fire station	Bandon Rural Fire Protection District - Randolph Station	Only under extreme fire weather
Fire service / Fire station	Central Coos Fire & Rescue Station 4	Only under extreme fire weather
Fire service / Fire station	Charleston Rural Fire Protection District - Crown Point Station	Only under extreme fire weather
Government service / Government office	Shore Acres Residence	Only under extreme fire weather
Government service / Government office	Shore Acres Shopyard	Only under extreme fire weather
FEMA Lifeline: Transportation		
Aviation / Landing strip	Gederos	Under high fire weather
Aviation / Landing strip	Powers	Under high fire weather
FEMA Lifeline: Water Systems		
Dam	Jackson Farms Dam	Only under extreme fire weather
Wastewater management / Storage	Sunset Bay wastewater lagoons	Only under extreme fire weather
Other water infrastructure / Water tower		Only under extreme fire weather
Tribal Infrastructure		
Tribal community center	Coquille Indian Tribe Community Plank House	Only under extreme fire weather
Tribal community center	Coquille Indian Tribe Culture, Education & Learning Services Department	Only under extreme fire weather
Tribal administration	CTCLUSI Caretake House	Only under extreme fire weather
Tribal housing	CTCLUSI Quantset	Only under extreme fire weather
Other Community Values		
Historical or cultural site	Shore Acres Historic House	Under high fire weather
Historical or cultural site	Cape Arago Lighthouse	Under high fire weather
Historical or cultural site	WWII bunkers	Under high fire weather
Place of worship	Pacific Community Church Inc	Under high fire weather
Place of worship	The Church of Jesus Christ of Latter-Day Saints	Only under extreme fire weather
Recreation site / Boating site	Tenmile Lake Boat Ramp	Under high fire weather
Recreation site / Cabin	Bald Knob Fire lookout	Under high fire weather
Recreation site / Camping	Bald Knob	Under high fire weather
Recreation site / Camping	Buck Creek Campground	Under high fire weather
Recreation site / Camping	Daphne Grove Campground	Under high fire weather
Recreation site / Camping	Eden Valley	Under high fire weather
Recreation site / Camping	Ferris Ford	Under high fire weather
Recreation site / Camping	Island Campground	Under high fire weather
Recreation site / Camping	Lockhart	Under high fire weather
Recreation site / Camping	Myrtle Grove	Under high fire weather
Recreation site / Camping	Park Creek Campground	Under high fire weather
Recreation site / Camping	Peacock	Under high fire weather

Community Lifeline: Component / Subcomponent	Name	Exposure to radiant heat and/or short-range embers
Recreation site / Camping	Pioneer Camp	Under high fire weather
Recreation site / Camping	Rock Creek Campground	Under high fire weather
Recreation site / Camping	Sleepy Hollow Mobile Home Park & RV	Under high fire weather
Recreation site / Camping	Sru Lake	Under high fire weather
Recreation site / Camping	Wooden Rock Creek	Under high fire weather
Recreation site / Day use area	Cape Argo State Park - Picnic Site	Under high fire weather
Recreation site / Day use area	Cedar Swamp Day Use Area	Under high fire weather
Recreation site / Day use area	Fisherman's Pullout	Under high fire weather
Recreation site / Day use area	Millicoma Myrtle Grove State Park Picnic Area	Under high fire weather
Recreation site / Day use area	Shore Acres Garden	Under high fire weather
Recreation site / Golf course	Bandon Dunes Golf Resort - Bandon Trails Golf Course	Under high fire weather
Recreation site / Parking area	Whiskey Run Beach Parking Lot	Under high fire weather
Recreation site / Summer camp	Camp Myrtlewood	Under high fire weather
Recreation site / Trailhead	Azalea Lake East Trailhead	Under high fire weather
Recreation site / Trailhead	Barklow Mountain	Under high fire weather
Recreation site / Trailhead	Barklow Mountain North	Under high fire weather
Recreation site / Trailhead	Big Tree	Under high fire weather
Recreation site / Trailhead	Coquille River Falls	Under high fire weather
Recreation site / Trailhead	Elk Creek Falls	Under high fire weather
Recreation site / Trailhead	Fourmile Creek Trailhead	Under high fire weather
Recreation site / Trailhead	Johnson Creek West	Under high fire weather
Recreation site / Trailhead	Mount Bolivar Trailhead	Under high fire weather
Recreation site / Trailhead	Panther Ridge - Buck Point	Under high fire weather
Recreation site / Trailhead	Panther Ridge - Clay Hill	Under high fire weather
Recreation site / Trailhead	Panther Ridge - Hanging Rock	Under high fire weather
Recreation site / Trailhead	Sucker Creek - Illinois Valley	Under high fire weather
Recreation site / Trailhead	Sucker Creek West - Powers	Under high fire weather
Recreation site / Interpretive site	Big Tree Observation Site	Under high fire weather
Recreation site / Interpretive site	Buck Creek Fish	Under high fire weather
Recreation site / Interpretive site	Cape Argo State Park - Scenic Overlook	Under high fire weather
Recreation site / Interpretive site	Eden Valley Meadow	Under high fire weather
Recreation site / Interpretive site	Elk Creek Falls	Under high fire weather
Recreation site / Interpretive site	Face Rock Viewpoint	Under high fire weather
Recreation site / Interpretive site	Golden Falls Lower Viewpoint	Under high fire weather
Recreation site / Interpretive site	Lower Cat Track	Under high fire weather
Recreation site / Interpretive site	Point Of Interest	Under high fire weather
Recreation site / Interpretive site	Silver Falls	Under high fire weather
Recreation site / Interpretive site	Upper Cat Track	Under high fire weather
Recreation site / Information center	South Fork Coquille River	Under high fire weather
Recreation site / Information center	Storm Ranch	Under high fire weather
Recreation site / Boating site	Bradley Lake Boat Ramp	Only under extreme fire weather
Recreation site / Camping	Bastendorff Campground	Only under extreme fire weather

Community Lifeline: Component / Subcomponent	Name	Exposure to radiant heat and/or short-range embers
Recreation site / Camping	Bullards Beach Campground	Only under extreme fire weather
Recreation site / Camping	Laverne County Park Campground	Only under extreme fire weather
Recreation site / Camping	Powers County Campground	Only under extreme fire weather
Recreation site / Camping	Sun Outdoors Coos Bay	Only under extreme fire weather
Recreation site / Day use area	Bullards Beach Amphitheater	Only under extreme fire weather
Recreation site / Day use area	Cape Argo State Park - Picnic Site	Only under extreme fire weather
Recreation site / Day use area	Hall Lake Day Use (Picnic & Trailhead)	Only under extreme fire weather
Recreation site / Day use area	Shore Acres Restroom	Only under extreme fire weather
Recreation site / Day use area	South Sunset Restrooms	Only under extreme fire weather
Recreation site / Golf course	Bandon Dunes Sheep Ranch Golf Course	Only under extreme fire weather
Recreation site / Parking area	Coquille River Lighthouse Parking Area	Only under extreme fire weather
Recreation site / Parking area	Devils Kitchen Parking Lot / Vista Point	Only under extreme fire weather
Recreation site / Parking area	South Slough Visitor Center Parking Lot	Only under extreme fire weather
Recreation site / Summer camp	Camp Remote	Only under extreme fire weather
Recreation site / Trailhead	Daphne Grove Trailhead	Only under extreme fire weather
Recreation site / Trailhead	Doerner Fir Trailhead	Only under extreme fire weather
Recreation site / Trailhead	Lost Lake Trailhead	Only under extreme fire weather
Recreation site / Trailhead	Madison Avenue Beach Access	Only under extreme fire weather
Recreation site / Interpretive site	Coos Bay Harbor Entrance Viewpoint	Only under extreme fire weather
Recreation site / Information center	South Slough Reserve Interpretive Center	Only under extreme fire weather

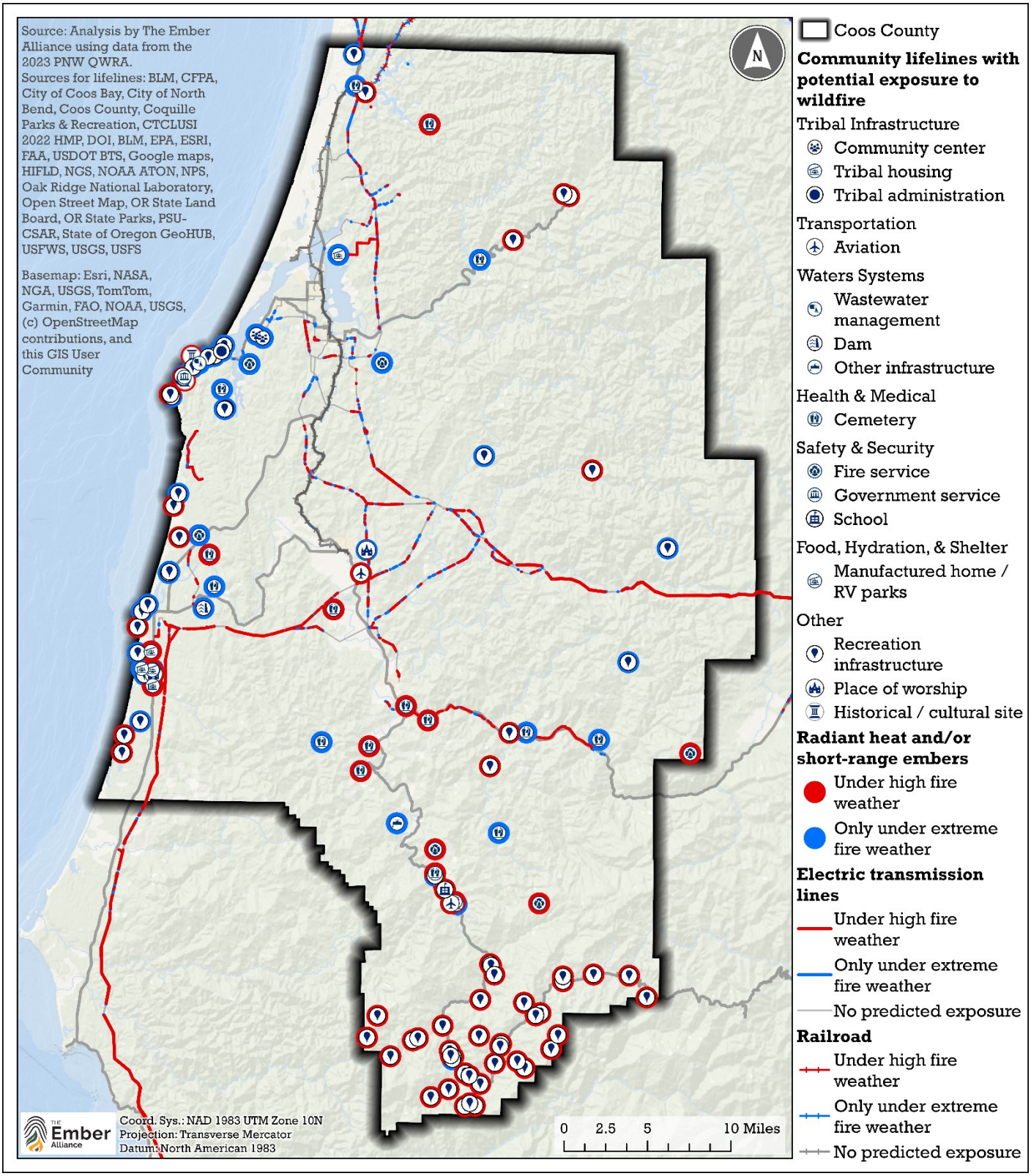


Figure B.13. *Predicted exposure of community lifelines in Coos County. Areas that could experience exposure under high weather conditions are at greater risk than those that experience exposure only under extreme weather conditions. Communications towers and hazardous material were redacted from public-facing maps for security purposes.*

9.e. Roadway Survivability

The Ember Alliance utilized fire behavior predictions to identify road segments that could experience non-survivable conditions during a wildfire. "Non-survivable roadways" were defined as portions of roads adjacent to areas with flame lengths greater than 8 feet. Drivers who are stopped or trapped on potentially non-survivable roadways could have a lower chance of survival due to radiant heat emitted from fires of this intensity. This assumption is based on the Haul Chart, which is a standard tool used by firefighters to relate flame lengths to tactical decisions (**Table B.1**). Direct attack of a flaming front is no longer feasible once flame lengths exceed about 8 feet due to the intensity of heat output (NWCG, 2019). Flames greater than 8 feet could also make roads impassable and cut residents off from egress routes. Non-survivable conditions are more common along roads lined by thick forests with abundant ladder fuels, such as trees with low limbs and saplings and tall shrubs beneath overstory trees.

Predictions of roadway survivability under high fire weather conditions included areas with conditional flame lengths >8 feet (**Figure B.2**), and roadway survivability under extreme fire weather conditions included areas with >3% probability of flame lengths exceeding 8 feet (**Figure B.3**). Areas that could experience non-survivable conditions under high weather conditions are at greater risk than those that experience non-survival conditions only under extreme weather conditions.

During days with high fire weather danger, 28% of roads in Coos County could potentially experience non-survivable conditions during wildfires (i.e., flame lengths over 8 feet), and this percentage rises to 30% under extreme fire weather conditions (**Figure B.14**). Some non-survivable road segments across Coos County are in areas where limited egress routes and high home densities create concerns for efficient and safe evacuations. These areas are a high priority for roadside fuel mitigation to create safer conditions for residents, visitors, fire fighters, and other first responders. See **Section 4.c.** for priority project areas in Coos County.

Mitigation actions along sections of road with high risk for non-survivable conditions during a wildfire can increase the chances of survival for residents stranded in their vehicles during a wildfire and decrease the chance that roadways become impassable due to flames.

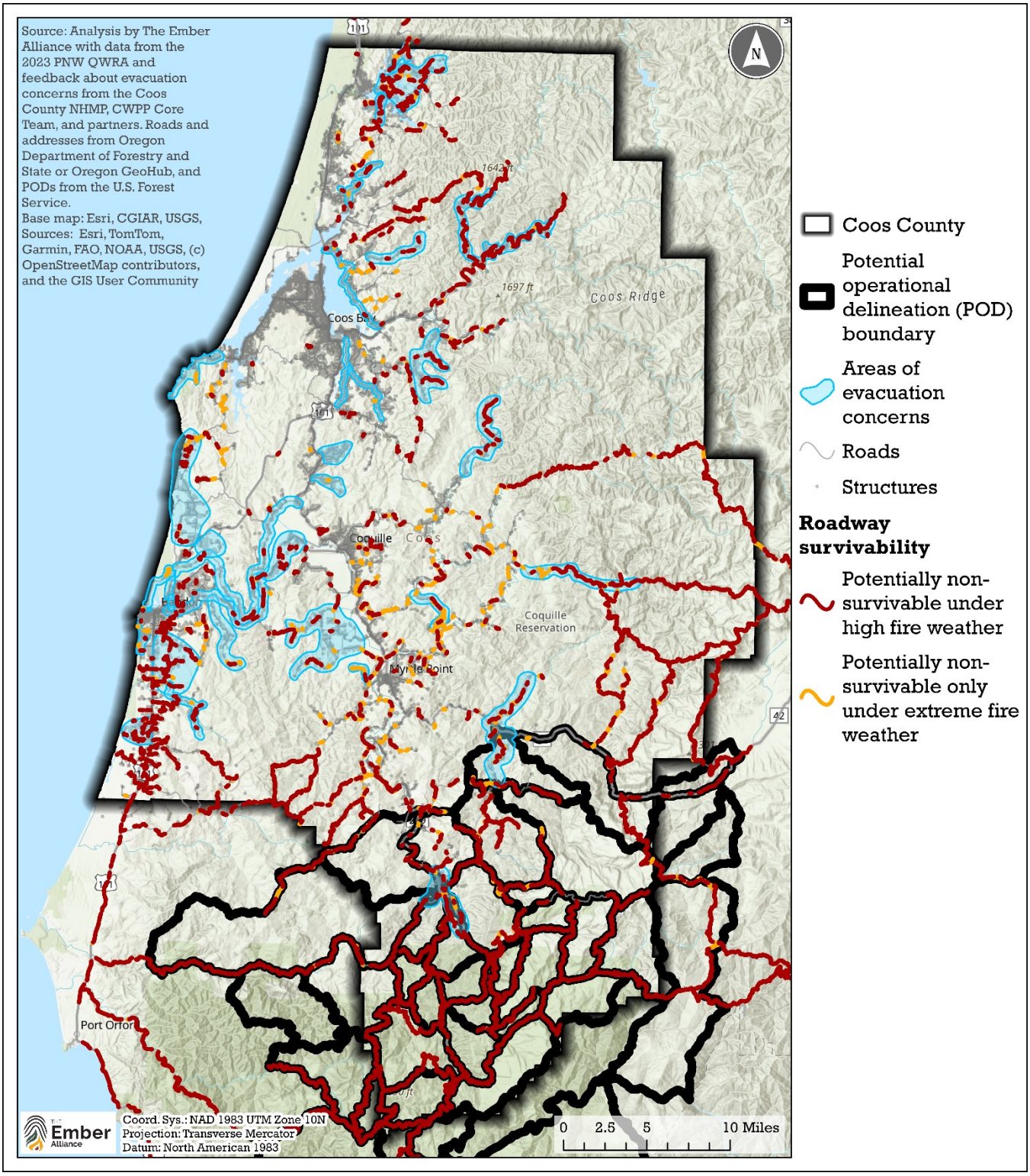


Figure B.14. *During days with high fire weather danger, 28% of roads in Coos County could potentially experience non-survivable conditions during wildfires (i.e., flame lengths over 8 feet). This percentage rises to 30% under extreme fire weather conditions. There are numerous areas within the county where limited egress routes and high home densities create concerns for efficient and safe evacuations. Source: Analysis by The Ember Alliance using data from the 2023 PNW QWRA and feedback on evacuation concerns from the Coos County NHMP, CWPP Core Team, and partners. POD boundaries from the USFS RMA Dashboard.*

9.f. Climate Change Assessment

Climate change has a measurable impact on fire intensity, frequency, and size, and these impacts are likely to continue over the coming decades (Parks et al., 2016). Fire behavior modeling for this CWPP from the 2023 PNW QWRA does not include future weather predictions. To explore the potential for exacerbated fire weather conditions in the future, The Ember Alliance used the Climate Toolbox's future boxplots and future time series tools (Hegewisch et al., 2021). These tools model climate scenarios for the next 50-100 years using two representative concentration pathways (RCP) that assume different levels of global greenhouse gas emissions The RCP 4.5 scenario assumes that greenhouse gas emissions stabilize before the year 2100, peaking around 2040, and the RCP 8.5 scenario assumes that greenhouse gas emissions are not curtailed by 2100 (IPCC, 2014).

Three variables were selected for this assessment: maximum temperatures in the summer (June, July, and August), the number of days with very high fire danger, and vapor pressure deficit (VPD) in the summer. The Climate Toolbox defines very high fire danger as days with 100-hour fuel moisture below the 10th percentile fuel moisture from 1971-2000. VPD is a meaningful measurement of moisture stress experienced by plants, more so than relative humidity because VPD is independent of temperature. High values of VPD indicate that the air can draw more moisture out of leaves while they photosynthesize, resulting in drier fuels. Higher values of VPD are strongly related to summers with a greater number of acres burned in the western U.S. (Seager et al., 2015).

The models predict that maximum summer temperatures in Coos County could increase by 2.6-3.7° Fahrenheit by 2050, going from 74.4°F in 2005 to 77.0-78.1°F in 2050 (**Figure B.15**). Average summer VPD could increase from 0.6 to 0.9 kilopascal (kPa) (**Figure B.16**). Coos County could experience 11 more days per year with very high fire danger (**Figure B.17**). Impacts of climate change might be variable across the county, much like current summer conditions are highly variable from west to east.

Fire behavior may be even more extreme, frequent, and extensive in the coming decades in Coos County. Mitigating actions in the coming years, including fuel treatments, defensible space around homes, and structure hardening, are critical to protecting life safety of residents and enhance community resiliency into the future.

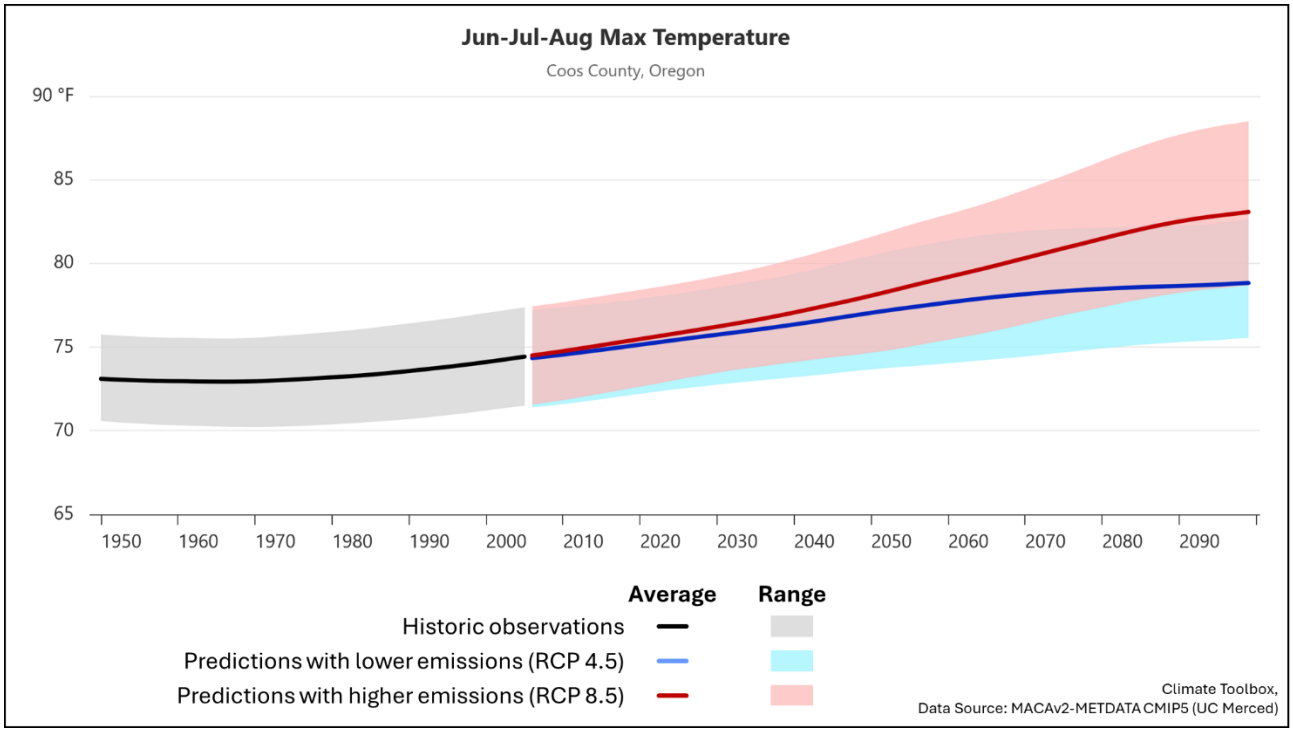


Figure B.15. *Predicted maximum summer temperature in Coos County under lower and higher greenhouse gas emission scenarios. Source: Climate Toolbox (Hegewisch et al., 2021).*

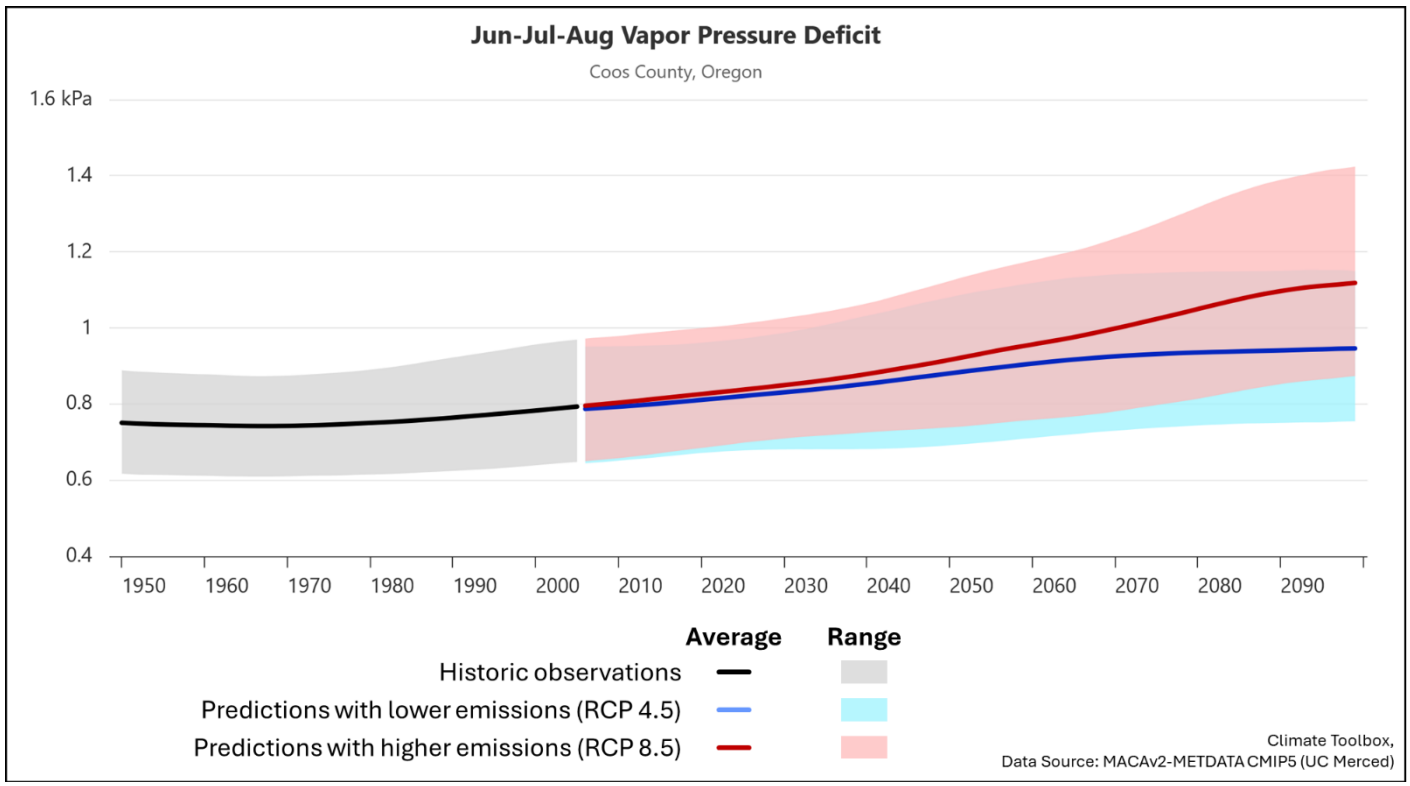


Figure B.16. *Predicted summer vapor pressure deficit in Coos County under lower and higher greenhouse gas emission scenarios. Source: Climate Toolbox (Hegewisch et al., 2021).*

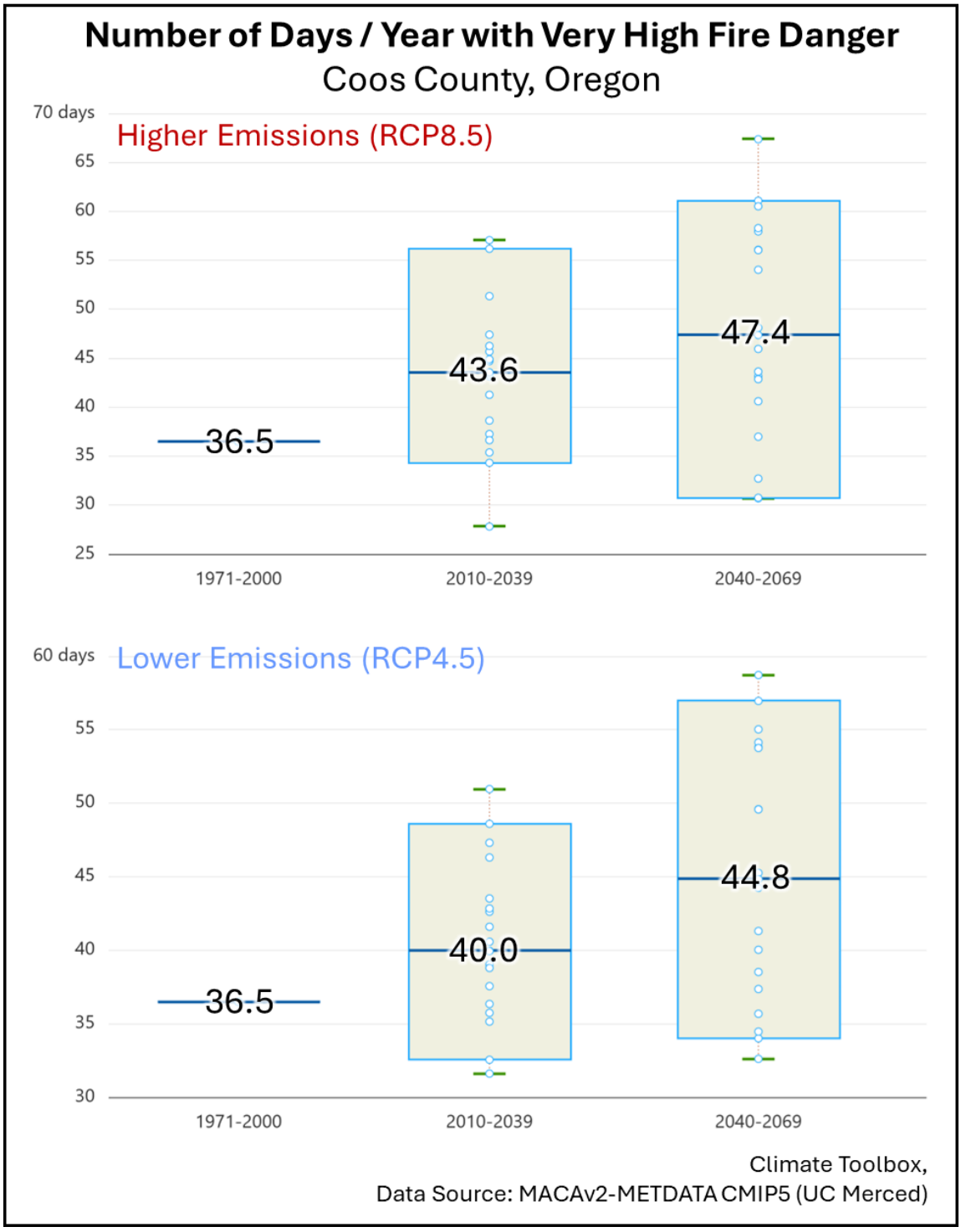


Figure B.17. *Predicted number of days with very high fire danger in Coos County under lower and higher greenhouse gas emission scenarios. Boxplots show 5th percentile, median, and 97th percentile predictions. Numbers indicate median values. Whiskers show minimum and maximum predictions. Dots represent individual predictions from different climate models. Source: Climate Toolbox (Hegewisch et al., 2021).*

9.g. Plan Unit Relative Risk Assessment

Risk Rating Approach

This CWPP compares the ***relative*** risk that wildfires pose to life and property in all 22 fire departments within Coos County, the CTCLUSI land known as the Tioga Tract, the Coquille Reservation (Kilkich), and six areas with clusters of structures that are not currently protected by a fire protection district.

To help prioritize hazard mitigation, education, and other activities in the county, relative risk was determined in four categories: fire risk, fire suppression challenges (e.g., limited hydrant availability and engine access), evacuation hazards, and home ignition zone hazards. Overall risk was also calculated by combining risk from the four subcategories. The assessment was based on predictions of fire behavior, radiant heat and ember cast exposure, roadway survivability, and other sources of data, including local input from the CWPP Steering Committee.

Relative risk ratings were developed specifically for Coos County, so the assessment is not suitable for comparing this county to other communities in Oregon or the United States. Rating scales were developed based on the range of values observed across the county (**Table B.4**). A summary of relative risk for each area of interest is presented in **Table B.5**.

Table B.4. *Relative risk rating values for Coos County.*

Hazard category	Max. points possible	Percent weight for overall risk	Lower	Moderate	High	Highest
A. Fire behavior	52	32%	<10	10-19	20-29	≥30
B. Fire suppression challenges	24	15%	0	1-9	10-17	≥18
C. Evacuation hazards	34	21%	<10	10-19	20-25	≥26
D. Home ignition zone hazards	52	32%	<15	15-29	30-35	≥36
Overall risk	162		<35	35-70	71-99	≥100

Relative Risk Rating Form

A. Fire Behavior	Points
1. Percent area with high to extreme fire behavior (from 2023 PNW QWRA; **Figure B.6**)[1]	
<5%	0
5-19%	4
20-40%	8
>40%	12
2. Percent area with >8-foot flame lengths (from 2023 PNW QWRA; **Figure B.2**) [1]	
<10%	0
10-35%	6
>35%	12
3. Average normalized burn probability (from 2023 PNW QWRA; **Figure B.7**) [1]	
<0.5%	0
0.5-<1.25%	4
≥1.25%	8
4. Density of reported incidence of gorse, Scotch broom, and Armenian blackberry within 1-mile of area (from ODA WeedMapper; **Figure 3.b.1**)	
<0.5 reports / mi²	0
0.5-<1.0 reports / mi²	4
>1.0-<3.0 reports / mi²	8
≥3.0 reports / mi²	12
5. Average density of lightning and human-caused ignitions from 1990-2024 (from ODF, NIFC, and FPA FOD; **Figure 2.e.2**)[1]	
Infrequent relative to rest of county (<1.0 ignitions / mi²)	0
Moderate relative to rest of county (1.0-2.0 ignitions / mi²)	4
Frequent relative to rest of county (>2.0 ignitions / mi²)	8
A. Total points possible	**52**

[1] Summarized for the area of interest and intersecting sub-watersheds to capture local topography and vegetation that can influence fire behavior (with the exception of density of noxious weed reports, which were only summarized within community boundaries).

B. Fire Suppression Challenges	Points
1. Structures covered by fire protection district	
Yes	0
No	12
2. Percent area with high to highest suppression difficulty index under 80th percentile weather and 15 mph winds (from USFS RMA – 2025 data)	
<15%	0
15-30%	6
>30%	12
B. Total points possible	**24**

C. Evacuation Hazards	Points
1. Contains communities identified as having limited egress capacity by CWPP Steering Committee (**Figure 2.f.10**)	
No communities	0
Several communities but <50% of structures in area	6
Several communities and <50% of structures in area	12
2. Percent or miles of roads with non-survivable conditions under extreme fire weather (**Figure 2.f.10**)	
<5% or <2 miles	0
5-20% or 2-<5 miles	4
20-40% or 5-10 miles	8
≥40% or >10 miles	12
3. Cell service availability (based on coveragemap.com and feedback from the CWPP Steering Committee)	
High signal strength	0
Moderate signal strength	5
None to low signal strength	10
C. Total points possible	**34**

D. Home Ignition Zone Hazards[2]	Points
1. Home construction, evaluated as percent of structures built before 1980 out of homes that could be exposed to short-range embers under extreme fire weather (house age from U.S. Army Corps of Engineers NSI and wildfire exposure from analyses for this CWPP--**Figure 2.f.9**)[3]	
<60%	0
60-95%	4
>95%	8
2. Percent or number of structures that are manufactured homes out of homes that could be exposed to short-range ember cast under extreme fire weather (wildfire exposure from analyses for this CWPP--**Figure 2.f.9**)	
<5% or <20 homes	0
5-10% or 20-70 homes	4
>10% or >70 homes	8
3. Percent or number of primary structures that could be exposed to radiant heat, short-range embers, and/or long-range embers under high fire weather conditions (wildfire exposure from analyses for this CWPP--**Figure 2.f.9**)	
<10% or <100 structures	0
10-50% or 100-500 structures	6
>50-80% or >500-2,000 structures	14
>80% or >2,000 structures	20
4. Percent or number of homes that are mid-slope on slopes >10 degrees out of homes that could be exposed to short-range ember cast under extreme fire weather (wildfire exposure from analyses for this CWPP--**Figure 2.f.9**)	
<10% or <40 structures	0
10-<20% or 40-150 structures	2
≥20% or >150 structures	4
5. Percent or number of homes that are on ridgetops out of homes that could be exposed to short-range ember cast under extreme fire weather (wildfire exposure from analyses for this CWPP--**Figure 2.f.9**)	
<10% or <40 structures	0
10-<20% or 40-150 structures	2
≥20% or >150 structures	4
6. Average number of structures potentially exposed to short-range ember cast from other structure (primary and auxiliary structures included)	
<3 structures	0
3-10 structures	4
>10 structures	8
D. Total points possible	**52**

[2] Predictions of structure exposure under high fire weather conditions were used for some variables and exposure under extreme fire weather conditions for others to capture a greater degree of variation between variables among the fire protection districts.

[3] Due to lack of other data on building construction material, an assumption was made that older homes tend to have less flame-resistant building material.

Relative Risk Summaries

Table B.5. *Relative risk ratings and description of specific challenges and hazards for FPDs, Tribal land, and unprotected areas across Coos County.*

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Allegany Overall relative risk: Highest	Highest	Highest	Highest	Highest
	Specific challenges / hazards: • **No guaranteed structure protection because area is not part of a fire protection district.** • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • All structures could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope. • High percentage of older homes with less ignition-resistant building material. • Very few egress routes. • Many miles of potentially non-survivable roads (17 miles). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Bandon FD Overall relative risk: Moderate	High	Moderate	Lower	Lower
	Specific challenges / hazards: • High density of highly flammable invasive species (primarily gorse). • High potential for home-to-home fire spread due to structure density. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Bandon RFD Overall relative risk: High	High	Highest	Lower	Highest
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • High density of highly flammable invasive species (primarily gorse). • Many structures (49%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Several areas with a high potential for evacuation congestion. • Many miles of potentially non-survivable roads (42 miles). • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Bridge RFPD Overall relative risk: Highest	Highest	High	High	Highest
	Specific challenges / hazards: • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • Practically all structures (98%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many miles of potentially non-survivable roads (21 miles). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Bunkerhill RFPD Overall relative risk: Moderate	Moderate	Moderate	Lower	Moderate
	Specific challenges / hazards: • High potential for home-to-home fire spread due to structure density. • High percentage of older homes with less ignition-resistant building material. • Very few egress routes. • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • High social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Charleston RFPD Overall relative risk: Moderate	Moderate	Moderate	Lower	Lower
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (primarily gorse). • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Coos Bay Fire and Rescue Overall relative risk: Moderate	Moderate	Moderate	Lower	Lower
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (Scotch broom and gorse). • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Coquille FD Overall relative risk: Moderate	Moderate	High	Lower	Lower
	Specific challenges / hazards: • Some structures (11%) could be exposed to wildfire by radiant heat and/or embers. • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Coquille RFPD Overall relative risk: High	High	High	Lower	Highest
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • Many structures (58%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Several areas with a high potential for evacuation congestion and limited egress routes. • Many miles of potentially non-survivable roads (19 miles). • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Coquille Tribe – Reservation (Kilkich) Overall relative risk: Moderate	Moderate	High	Lower	Lower
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (gorse and Scotch broom). • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
CTCLUSI Tioga Tract Overall relative risk: Moderate	Highest	None*	High	None*
	Specific challenges / hazards: • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • High density of highly flammable invasive species (Scotch broom, gorse, and Armenian blackberry). *Note: There are no homes on the CTCLUSI Tioga Tract			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Daniels Creek and South Coos River Lane Overall relative risk: Highest	Highest	Highest	Highest	Highest
Specific challenges / hazards: • **No guaranteed structure protection because area is not part of a fire protection district.** • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • High density of highly flammable invasive species (Scotch broom and Armenian blackberry). • All structures could be exposed to wildfire by radiant heat and/or embers. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Very few egress routes. • Several miles of potentially non-survivable roads (6 miles). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.				

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Dora-Sitkum RFPD Overall relative risk: Highest	Highest	High	High	Highest
Specific challenges / hazards: • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • Moderate density of highly flammable invasive species (Scotch broom, gorse, and Armenian blackberry). • Practically all structures (94%) could be exposed to wildfire by radiant heat and/or embers. • High percentage of older homes with less ignition-resistant building material. • Very few egress routes and long drive times to safety. • Many miles of potentially non-survivable roads (13 miles). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.				

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Fairview Road Overall relative risk: Highest	Highest	High	Highest	Highest
	Specific challenges / hazards: • **Currently no guaranteed structure protection because area is not part of a fire protection district (but amendment is on the ballot).** • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • Moderate density of highly flammable invasive species (Scotch broom, gorse, and Armenian blackberry). • All structures could be exposed to wildfire by radiant heat and/or embers. • Many homes built mid-slope. • High percentage of older homes with less ignition-resistant building material. • Very few egress routes and long drive times to safety. • High percentage of potentially non-survivable roads (50%). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Fairview RFPD Overall relative risk: High	Highest	Moderate	Moderate	Highest
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • High density of highly flammable invasive species (Scotch broom and Armenian blackberry). • Some structures (21%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Very few egress routes and long drive times to safety. • Moderate percentage of potentially non-survivable roads (18%). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Gaylord Overall relative risk: High	Moderate	Moderate	Highest	Moderate
	Specific challenges / hazards: • **No guaranteed structure protection because area is not part of a fire protection district.** • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • Many structures (72%) could be exposed to wildfire by radiant heat and/or embers. • Many homes built mid-slope and/or on ridgelines. • Moderate percentage of potentially non-survivable roads (25%). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • High social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Greenacres RFPD Overall relative risk: High	High	Highest	Lower	High
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (primarily gorse). • Many structures (68%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Several areas with a high potential for evacuation congestion and limited egress routes. • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Hauser RFPD Overall relative risk: Moderate	Moderate	Moderate	Highest	Moderate
	Specific challenges / hazards: • High challenges for wildfire suppression until the Hause RFPD is able to rebuild their station and acquire equipment after the complete destruction of the station in a fire in October, 2025. • Moderate density of highly flammable invasive species (primarily Scotch broom). • Some structures (20%) could be exposed to wildfire by radiant heat and/or embers. • Moderate to high potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Lakeside RFPD Overall relative risk: High	High	Highest	Moderate	High
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • Moderate density of highly flammable invasive species (Scotch broom). • Many structures (53%) could be exposed to wildfire by radiant heat and/or embers. • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Many areas with a high potential for evacuation congestion and limited egress routes. • Several miles of potentially non-survivable roads (8 miles). • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Lee Valley Overall relative risk: High	High	Moderate	Highest	Moderate
	Specific challenges / hazards: • **No guaranteed structure protection because area is not part of a fire protection district.** • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • High density of highly flammable invasive species (Scotch broom and Armenian blackberry). • Many structures (56%) could be exposed to wildfire by radiant heat and/or embers. • Moderate percentage of potentially non-survivable roads (23%). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Libby RFPD Overall relative risk: Moderate	High	High	Lower	Lower
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (primarily gorse). • Some structures (14%) could be exposed to wildfire by radiant heat and/or embers. • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Millington RFPD Overall relative risk: Moderate	Moderate	High	Lower	Moderate
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (primarily gorse). • Some structures (16%) could be exposed to wildfire by radiant heat and/or embers. • High potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Several areas with a high potential for evacuation congestion. • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Myrtle Point FD Overall relative risk: Lower	Lower	Moderate	Lower	Lower
	Specific challenges / hazards: • High potential for home-to-home fire spread if fire were to start from embers due to structure density. • Many homes built on ridgelines. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Myrtle Point RFPD Overall relative risk: High	High	High	Moderate	High
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • Many structures (61%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • Several areas with a high potential for evacuation congestion and limited egress routes. • Many miles of potentially non-survivable roads (23 miles). • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
North Bay RFPD Overall relative risk: High	High	Highest	Moderate	Moderate
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • Many structures (70%) could be exposed to wildfire by radiant heat and/or embers. • Moderate to high potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Several areas with a high potential for evacuation congestion and limited egress routes. • Several miles of potentially non-survivable roads (6 miles). • Mixed cell service coverage, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
North Bend FD Overall relative risk: Lower	Lower	Moderate	Lower	Lower
	Specific challenges / hazards: • Moderate density of highly flammable invasive species (Scotch broom and gorse). • High potential for home-to-home fire spread if fire were to start from embers due to structure density. • High percentage of older homes with less ignition-resistant building material. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Powers FD Overall relative risk: Highest	Highest	Highest	High	High
	Specific challenges / hazards: • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • All structures could be exposed to wildfire by radiant heat and/or embers. • High potential for home-to-home fire spread due to structure density. • High percentage of older homes with less ignition-resistant building material. • Limited egress routes and long drive times to safety. • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • High social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Powers outskirts Overall relative risk: Highest	Highest	High	Highest	Highest
	Specific challenges / hazards: • **No guaranteed structure protection because area is not part of a fire protection district.** • Great potential for high to extreme fire behavior due to steep slopes and dense vegetation. • Practically all structures (98%) could be exposed to wildfire by radiant heat and/or embers. • High percentage of older homes with less ignition-resistant building material. • Limited egress routes and long drive times to safety. • Several miles of potentially non-survivable roads (5 miles). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • High social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Seven Devils Overall relative risk: High	Moderate	Highest	High	Moderate
	Specific challenges / hazards: • **No guaranteed structure protection because area is not part of a fire protection district.** • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • All structures could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Moderate percentage of potentially non-survivable roads (39%). • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts. • Moderate social vulnerability, which indicates that some residents might need assistance to prepare for, respond to, and recover after wildfire.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Sumner RFPD Overall relative risk: High	Highest	High	Moderate	High
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • High density of highly flammable invasive species (Scotch broom and Armenian blackberry). • Many structures (68%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

Name of Area	Potential fire behavior	Potential structure exposure	Wildland fire suppression challenges	Evacuation challenges
Timber Park FD Overall relative risk: High	Moderate	Highest	Moderate	Moderate
	Specific challenges / hazards: • Moderate potential for high to extreme fire behavior in areas with steep slopes and dense vegetation. • Most structures (85%) could be exposed to wildfire by radiant heat and/or embers. • Moderate potential for home-to-home fire spread due to structure density. • Many homes built mid-slope and/or on ridgelines. • High percentage of older homes with less ignition-resistant building material. • Many areas with poor cell service, which impacts the ability of residents to receive emergency alerts.			

9.h. Fuel Treatment Prioritization

Assessing Potential Treatment Need

To support fuel treatment prioritization for the Coos County CWPP, the potential treatment need was assessed for stand-scale fuel treatments cross the county. The county was subdivided into hillslopes within small watersheds (i.e., an area of land where all precipitation falling in that area drains to the same location). Each small watershed had three hillslopes—one on each side of a stream or river and one above the headwaters of the watershed. Hillslopes were delineated in ArcGIS using a modified version of the WEPP Hillslope Toolbox, which is based on TOPAZ (Topographic Parameterization Software) from the USDA Agricultural Research Service.

Hillslopes were delineated with a critical source area of 150 acres (60 hectares) and a minimum source channel length of 330 feet (100 meters). Critical source area is the minimum allowable area above the head of a first-order channel, and minimum source channel length is the minimum length of a channel used to delineate watersheds. Hillslopes were also split by major rivers and roads because these feature might act as barriers to fire spread, and stand-scale fuel treatments often occur on one side of a major road or river a time.

Potential need for fuel treatments in each hillslope was based on potential exposure of structures to short-range ember cast, short-range, or long-range embers originating from vegetation in the hillslope, non-survivable roadways, conditional net value change, suppression difficulty index (**Figure B.18**), burn probability, and ignition density. Each variable had its own weight and cutoff values, which were created specifically for Coos County to create a range of treatment needs across the landscape (**Table B.6**; **Figure B.19**).

The potential need for roadside treatments was informed by roadway survivability, areas of evacuation concern identified by the CWPP Steering Committee, and the location of potential operational delineations (PODs) (**Figure B.20**). PODs are topographic areas bounded by features suitable for fire control (e.g., ridgetops and roads) that can be used for tactical operations during wildfire events and serve as management units for proactive ecological restoration and wildfire risk mitigation; in other words, they are polygons drawn based on existing landscape features that are places that firefighters have a good chance of slowing or stopping a wildfire, if mitigated and used. PODs are collaboratively developed by fire and fuel managers with local, county, state, and federal agencies. According to the U.S. Forest Service, the PODs pre-planning framework has been applied on over 40 national forests and counting, often including adjacent landowners and jurisdictions for cross-boundary planning. See the PODs StoryMap from the Rocky Mountain Research Station for more information.

Identifying Treatment Priorities

Using analyses from the CWPP wildfire hazard assessment, existing priorities, and local knowledge, the Coos County CWPP Steering Committee and partners delineated priority projects areas in-person on September 18, 2025. These project areas were later refined and prioritized by the CWPP Steering Committee, resulting in the priority projects recommended in **Section 4.c**.

Many partner organizations were invited to contribute feedback, and those that included the in-person meeting included representatives from the Oregon State Fire Marshall, Oregon State University Extension, Oregon Department of Food and Agriculture, CFPA, American Red Cross, City of Bandon, Gorse Action Group, Bay Area Hospital, Coos Bay Rail Line, Coos County Airport District, and Coos-Curry Electric Cooperative. Follow-up conversations were held with the BLM, U.S. Forest Service, and Coos County Weed Board.

For the meeting on September 18, 2025, partners were broken up into two groups to identify priority projects. They were then directed to think about projects to protect community lifelines and roadways, to mitigate wildfire risk around homes, and to improve ecological conditions at the landscape-scale. Each group was given several maps with the following layers and a transparency they could move between maps to draw treatment boundaries:

- Potential treatment need (**Figure B.19**)
- Previous fuel treatments (**Figure B.21**)
- Existing partner priorities (**Figure B.21**)
- Fire behavior class (**Figure B.6**)
- Conditional net value change (**Figure B.8**)
- Exposure of community lifelines (**Figure B.13**)
- Roadway survivability, areas of evacuation concern, and POD boundaries (**Figure B.20**)
- Landownership (**Figure 2.a.1**)

After working independently for an hour, the two groups shared and compared their maps of draft priority project areas (see images below). The process showed a clear shared goal to prioritize work that protects life safety and community lifelines / infrastructure within the community. In fall and winter 2025, the Coos County CWPP Steering Committee refined priority project areas, defined goals, and assigned project leads. A total of 40 priority projects were identified for the 2026 Coos County CWPP, which are described in detail in **Section 4.c.**

Members of the Coos County CWPP Steering Committee and other partner organizations created draft priority project areas at a meeting on September 18, 2025. These draft projects were later refined and used to create the 51 priority project areas for the 2026 Coos County CWPP. Photo credit: The Ember Alliance.

Table B.6. *Methodology for ranking potential need for stand-scale fuel treatments to mitigate fire hazards to support treatment prioritization for the Coos County CWPP.*

Potential need for fuel treatments	Variable weight		Highest	High	Moderate
Number of structures potentially exposed to radiant heat and/or short- or long-range ember cast from the hillslope under high fire weather conditions (**Figure B.10**)	40%	Cutoff	≥25 structures	>10-25 structures	1-10 structures
		Points	40	20	10
Miles of roadways exposed to potentially non-survivable conditions under extreme fire weather conditions (**Figure B.14**)	10%	Cutoff	>2 miles	>1-2 miles	>0-1 miles
		Points	10	5	2
Inverse percentile rank of the conditional net value change from the 2023 PNW QWRA for watersheds, wildlife habitat, ecological integrity, and timber to assess areas that have the greater potential for loss from wildfire[1]	20%	Cutoff	>80th	>50-80th	>13-50th
		Points	30	10	5
Percent area with high to highest suppression difficulty index under 90th percentile conditions (analysis by the USFS RMA; **Figure B.18**)	10%	Cutoff	>75%	>50-75%	>15-50%
		Points	10	5	2
Average normalized burn probability from the 2023 PNW QWRA (**Figure B.7**)	10%	Cutoff	>4%	>2-4%	>1-2%
		Points	10	5	2
Average ignition density in ignitions / mi^2 (from ODF, NIFC, and FPA FOD)	10%	Cutoff	>2 ignitions/mi^2	>1-2 ignitions/mi^2	>0.25-1 ignitions/mi^2
		Points	10	5	2
Overall ranking (sum of values)		Points	≥46	30-45	16-29

[1] Conditional net value change for people and property were excluded because these impacts were already accounted for with structure exposure to radiant heat and/or short- or long-range ember cast.

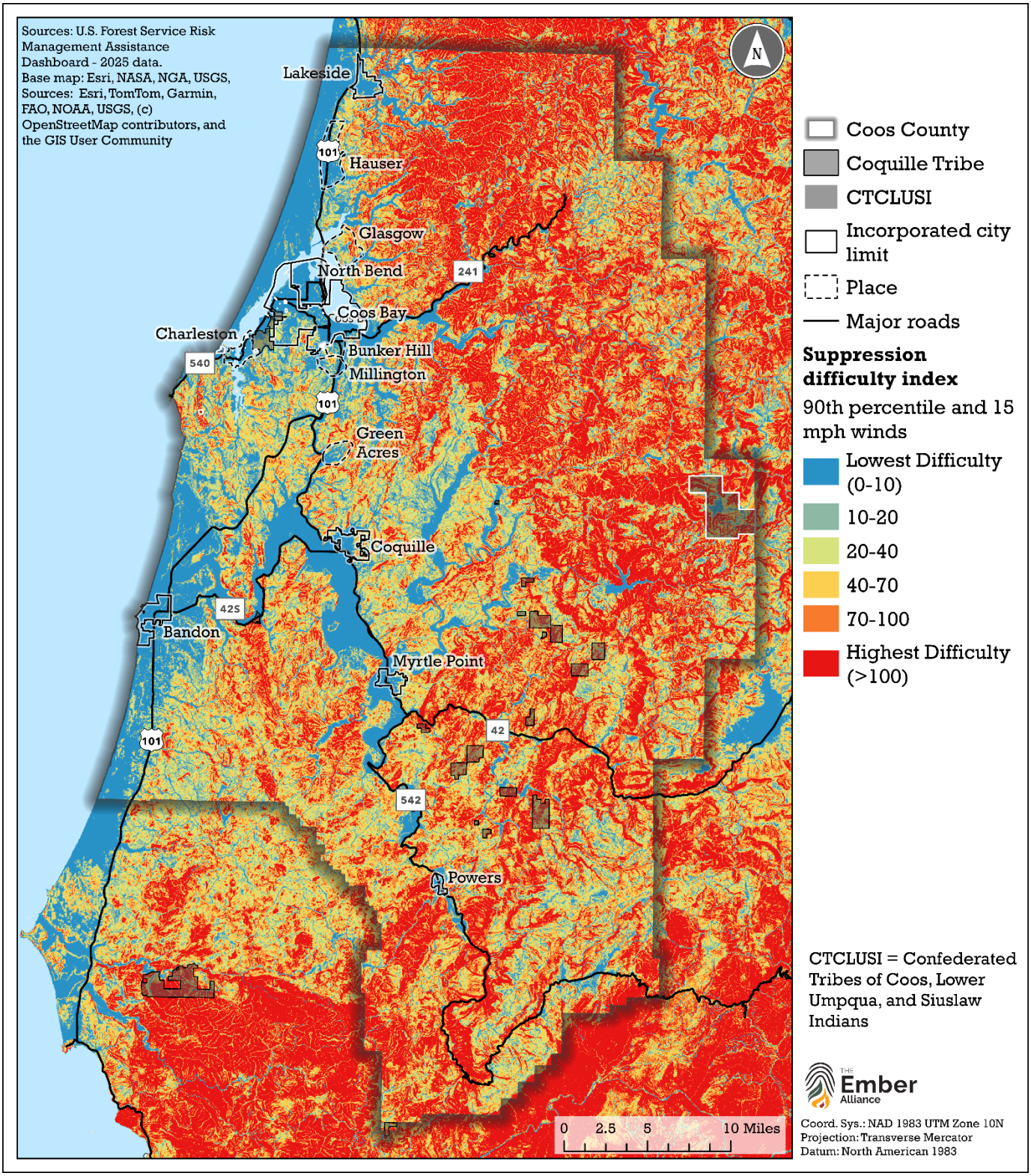


Figure B.18. *Suppression difficulty index under 90th percentile fire weather conditions (very hot and dry) and 15 mph winds. Suppression difficulty index is a measure of the relative effort required to suppress a wildfire based on topography, fuels, expected fire behavior under severe fire weather conditions, firefighter line production rates in various fuel types, and accessibility (distance from roads/trails). Source: U.S. Forest Service, Risk Management Assistance Dashboard—2025 data.*

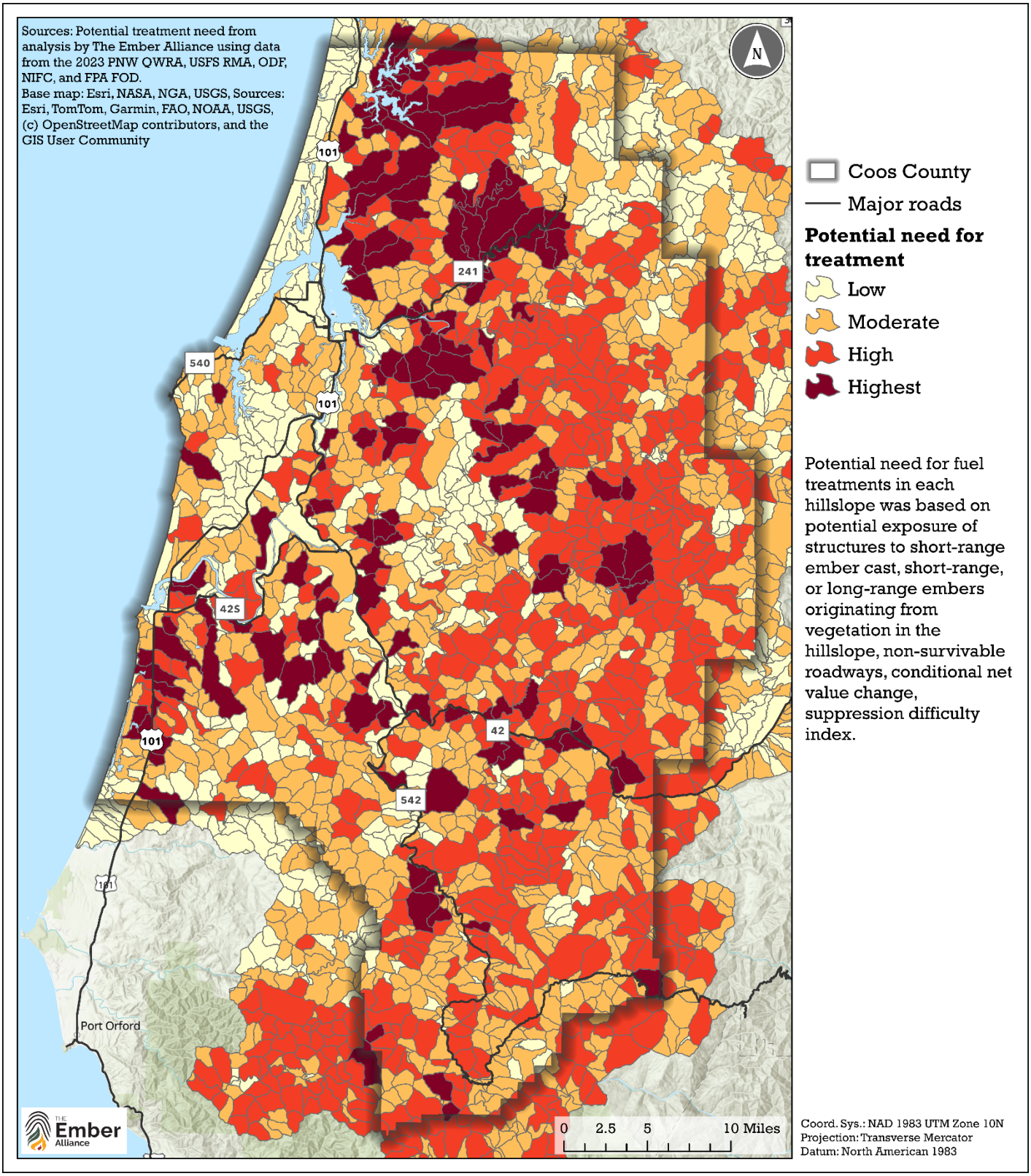


Figure B.19. *Potential need for stand-scale fuel treatments in and around Coos County based on variables outlined in* ***Table B.6****. This analysis served as one source of information for prioritizing fuel treatments for the 2026 Coos County CWPP. Source: Analysis by The Ember Alliance using data from the 2023 PNW QWRA, USFS RMA, ODF, NIFC, and FPA FOD.*

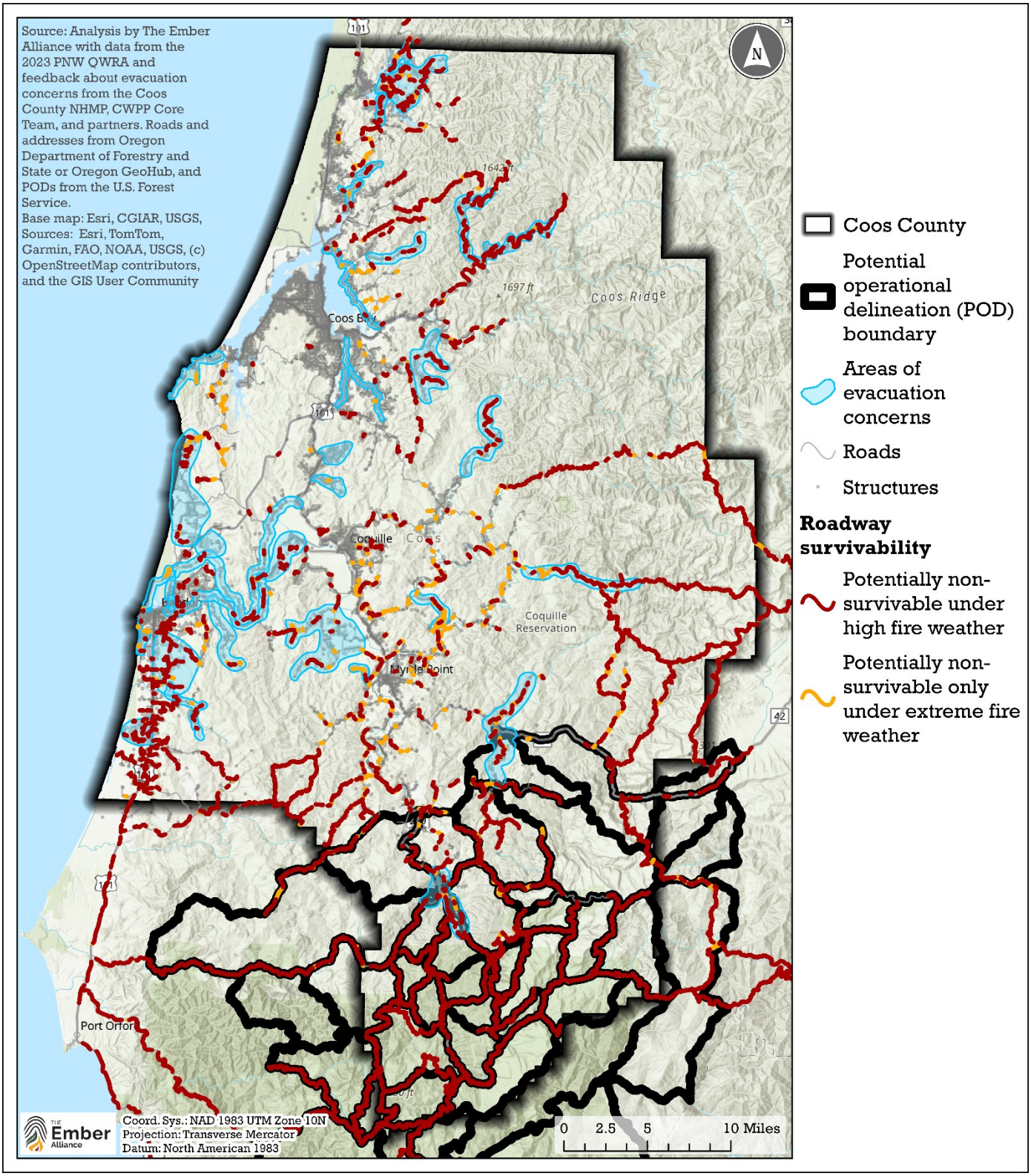


Figure B.20. *Variables considered for prioritizing roadside fuel treatments for the 2026 Coos County CWPP included areas of evacuation concern, roadway survivability, and potential operational delineations (PODs). PODs are topographic areas bound by features suitable for fire control (e.g., ridgetops and roads) that can be used for tactical operations during wildfire events and serve as management units for proactive ecological restoration and wildfire risk mitigation. Source: Analysis by The Ember Alliance, CWPP Advisory Committee and partners, and PODs from the U.S. Forest Service, [Risk Management Assistance Dashboard](#)—2025 data.*

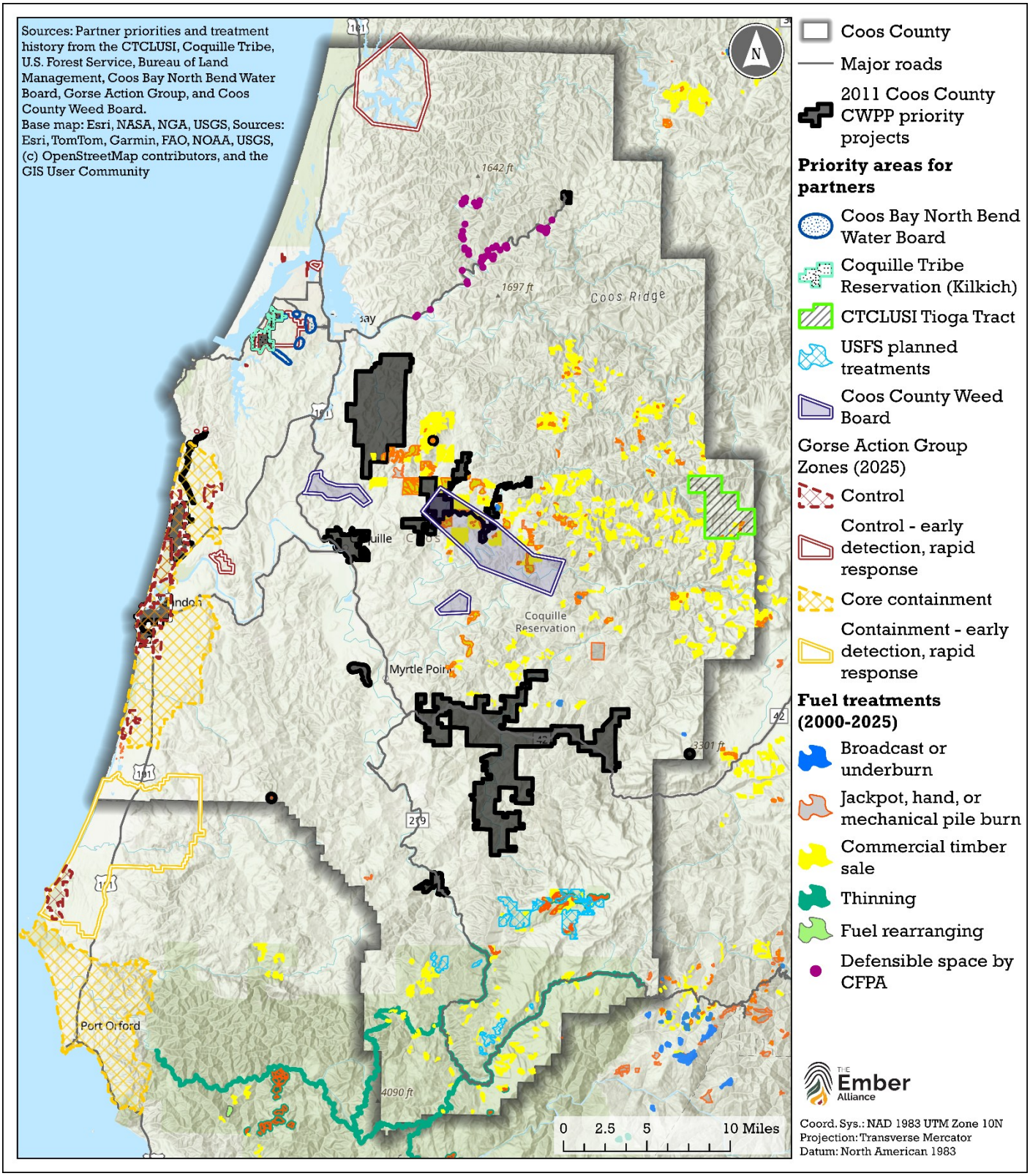
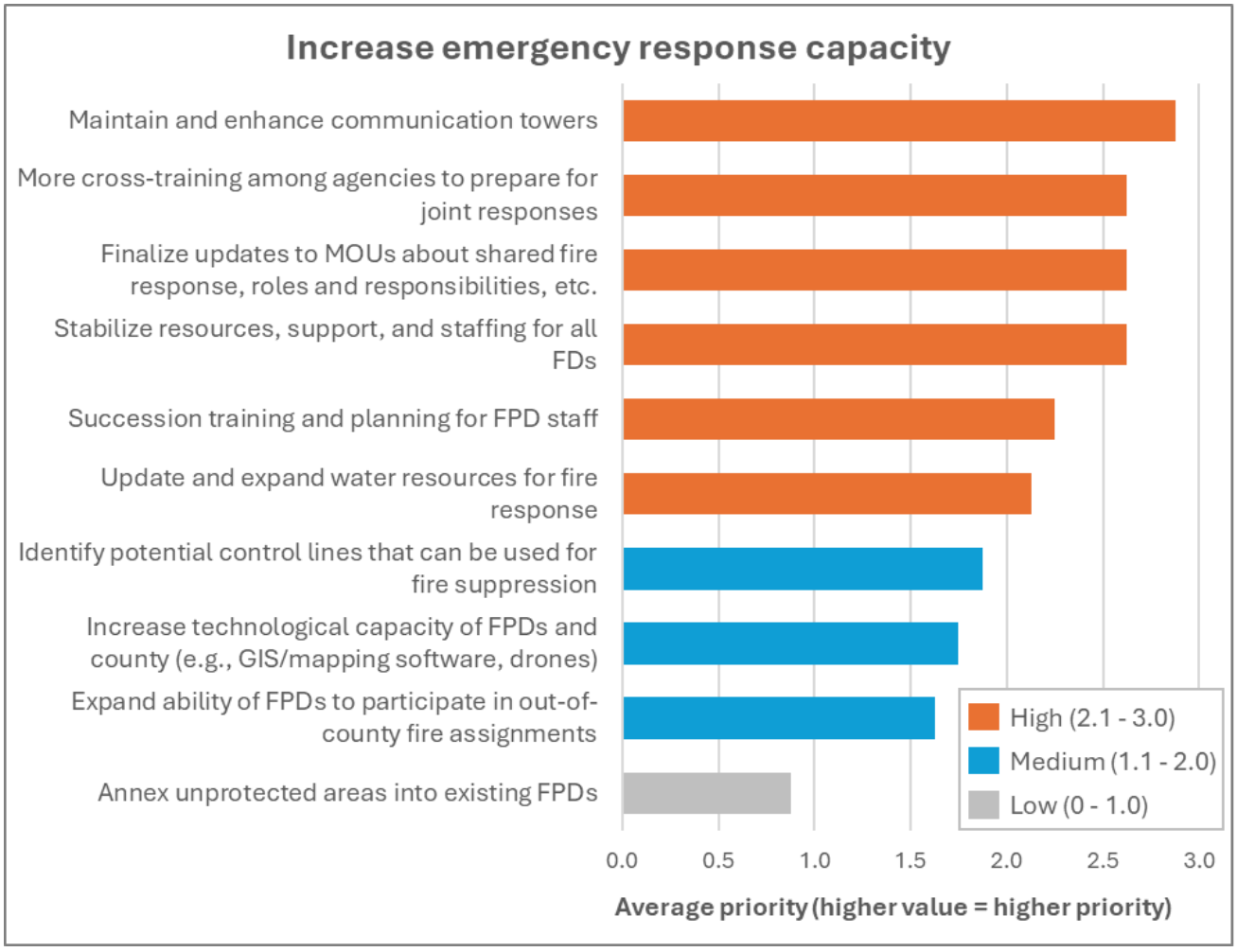


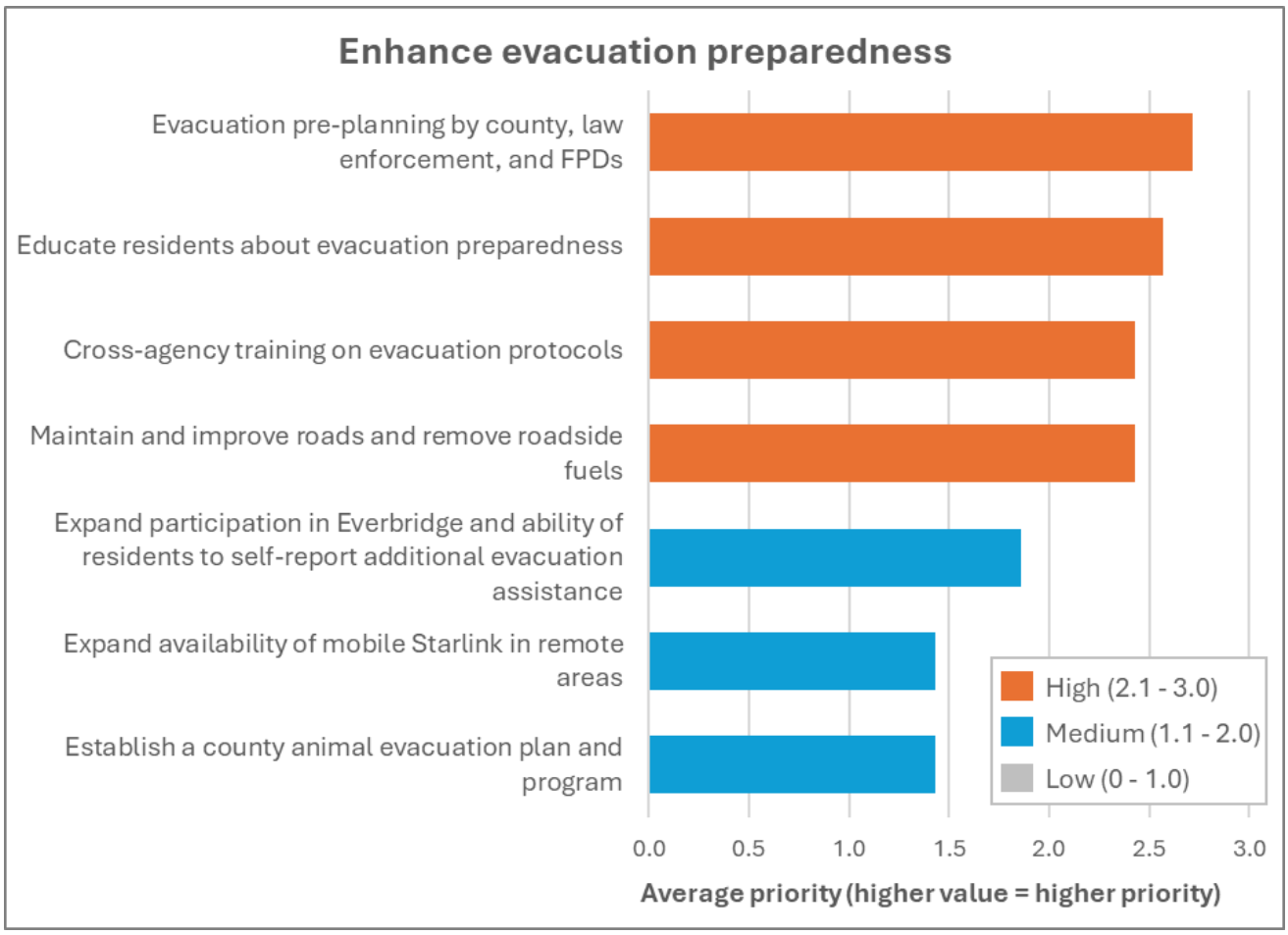
Figure B.21. *Previous fuel treatments and partner priorities were also factored into treatment priorities for the 2026 Coos County CWPP. Source: Treatment history from the U.S. Forest Service, BLM, and CFPA, and treatment priorities from the Confederated Tribes of the Coos, Lower Umpqua, & Siuslaw Indians (CTCLUSI), Coquille Tribe, Coos Bay North Bend Water Board, Coos County Weed Board, USFS, GAG, and 2011 Coos County CWPP.*

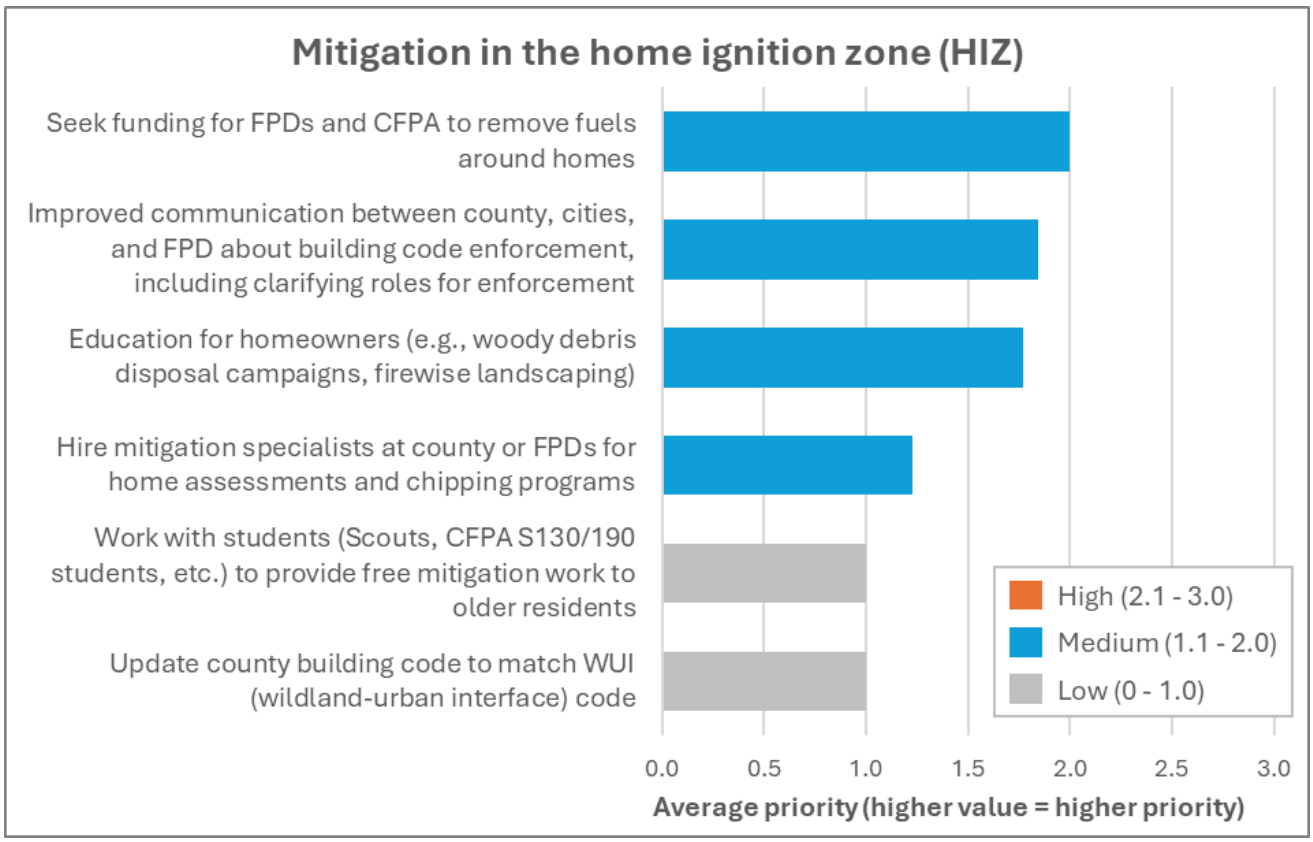
9.i. Programmatic Prioritization

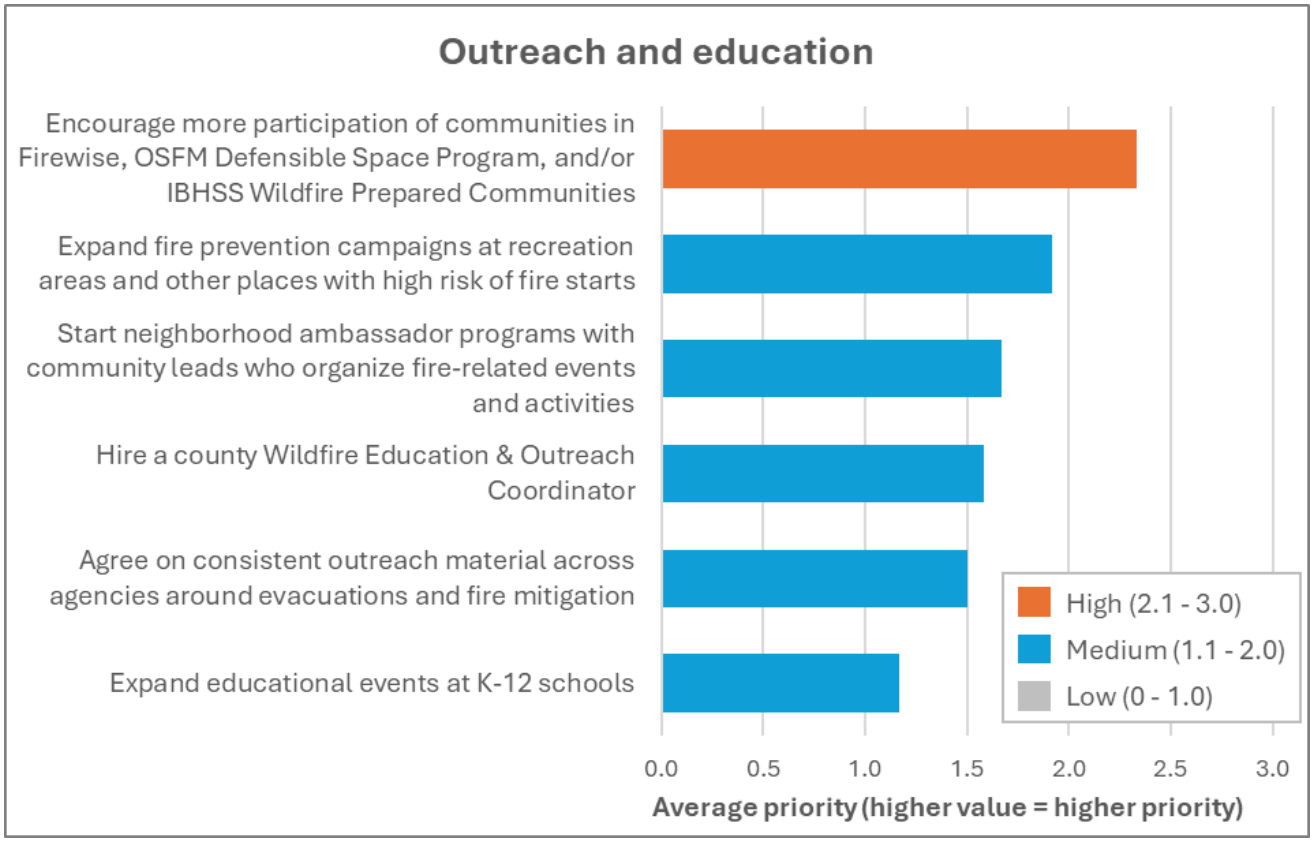
Programmatic prioritization factored in feedback from the CWPP community survey (see **Appendix C**), discussions with the CWPP Core Team and Steering Committee, and responses to a questionnaire shared with the Steering Committee, fire chiefs, and partners attending the in-person prioritization meeting on September 18, 2025. Respondents were asked to rate the priority of different actions to mitigate wildfire risk and enhance emergency preparedness in Coos County. These responses helped inform the table of priorities in **Section 3.e**. Questions on enhancing evacuation preparedness and increasing emergency response capacity were answered by eight members of the steering committee and fire chiefs. The other topics were prioritized by 13 individuals from the Steering Committee, fire chiefs, and partners who attended the prioritization meeting in September.

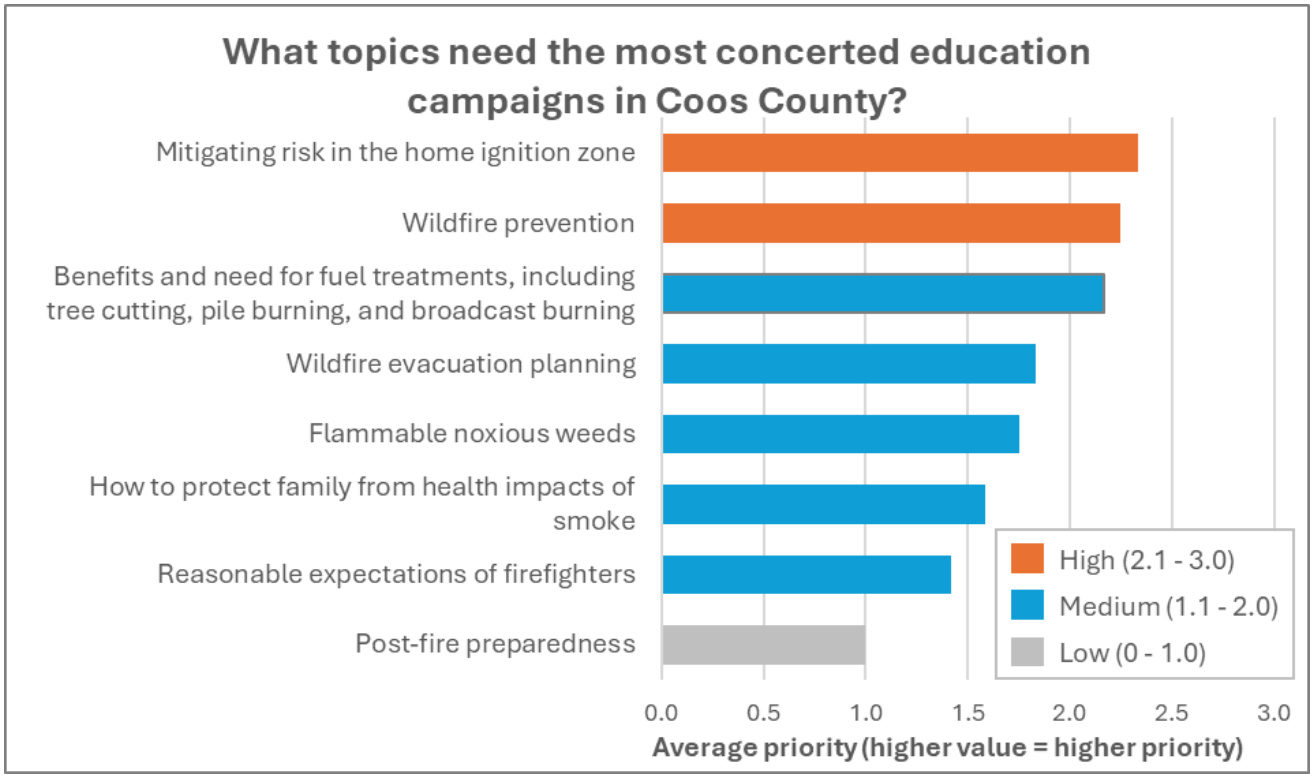


Note: Out of various options for increasing technological capacity of FPDs and the county, the most popular responses were AI cameras on all communication towers and utilizing Evertell for cross-agency communication. Also popular were creating a mobile supply cache and enhancing GIS capacity for maps during incidents. Several respondents expressed interest in the use of drones to monitor fire spread and mobile Starlink setups for vehicles.

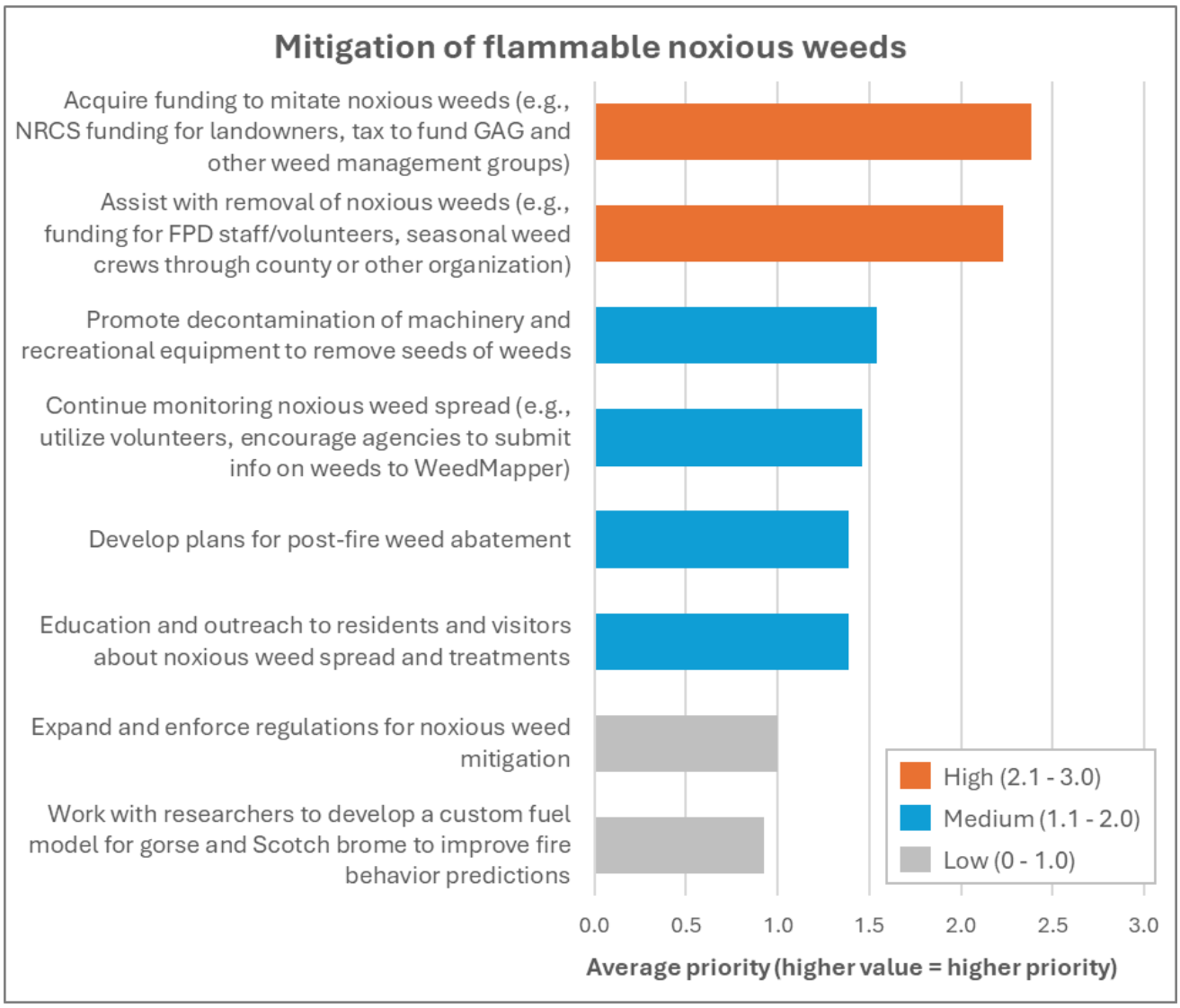

Enhance evacuation preparedness
Evacuation pre-planning by county, law enforcement, and FPDs
Educate residents about evacuation preparedness
Cross-agency training on evacuation protocols
Maintain and improve roads and remove roadside fuels
Expand participation in Everbridge and ability of residents to self-report additional evacuation assistance
Expand availability of mobile Starlink in remote areas
Establish a county animal evacuation plan and program
High (2.1 - 3.0)
Medium (1.1 - 2.0)
Low (0 - 1.0)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Average priority (higher value = higher priority)

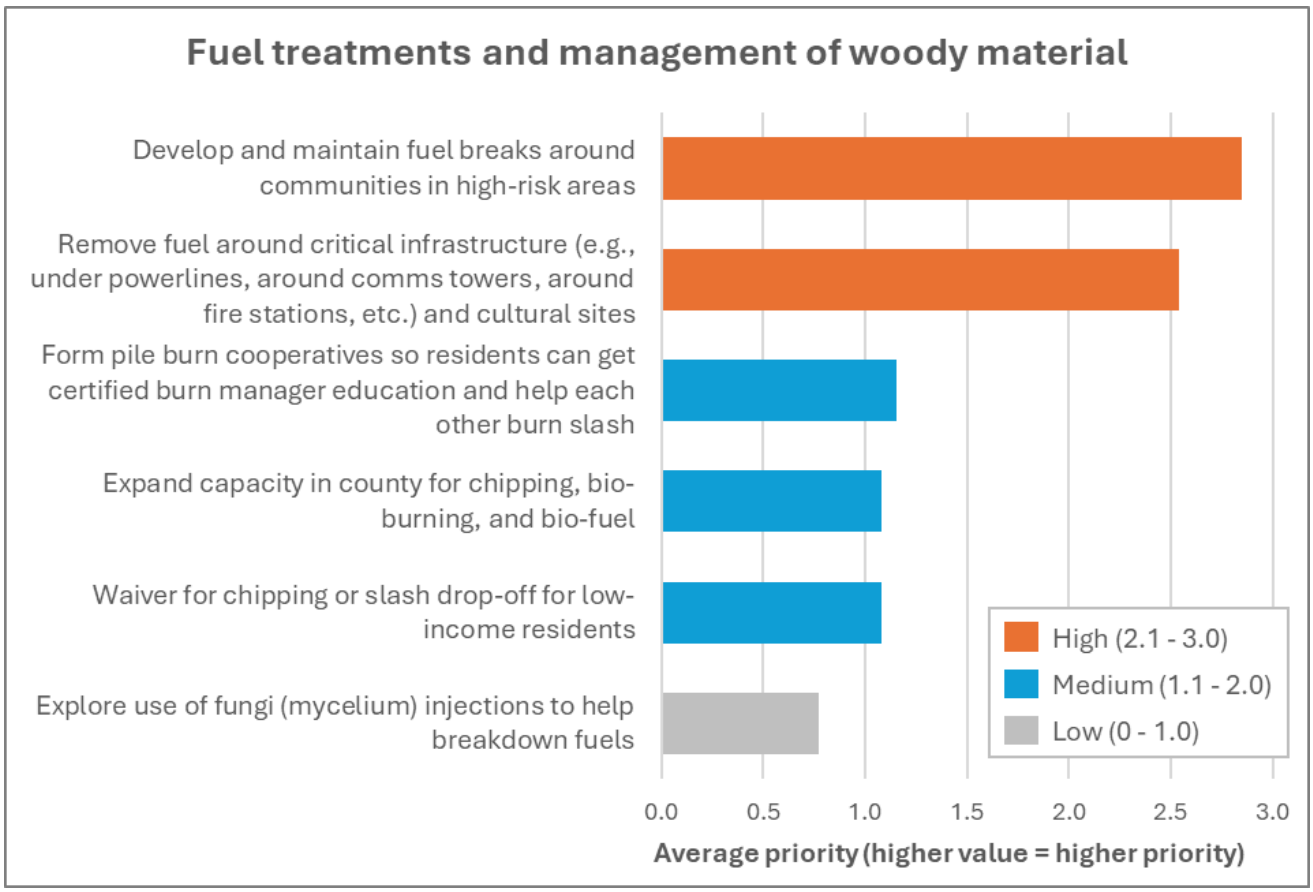

Mitigation in the home ignition zone (HIZ)
Seek funding for FPDs and CFPA to remove fuels around homes
Improved communication between county, cities, and FPD about building code enforcement, including clarifying roles for enforcement
Education for homeowners (e.g., woody debris disposal campaigns, firewise landscaping)
Hire mitigation specialists at county or FPDs for home assessments and chipping programs
Work with students (Scouts, CFPA S130/190 students, etc.) to provide free mitigation work to older residents
Update county building code to match WUI (wildland-urban interface) code
High (2.1 - 3.0)
Medium (1.1 - 2.0)
Low (0 - 1.0)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Average priority (higher value = higher priority)





Reasonable expectations for firefighters include informing the public that if their address is not clearly visible, firefighters might not find their property in an emergency and that if someone's home is not in a FPD, there might not be resources to protect their property.


Mitigation of flammable noxious weeds
Acquire funding to mitate noxious weeds (e.g., NRCS funding for landowners, tax to fund GAG and other weed management groups)
Assist with removal of noxious weeds (e.g., funding for FPD staff/volunteers, seasonal weed crews through county or other organization)
Promote decontamination of machinery and recreational equipment to remove seeds of weeds
Continue monitoring noxious weed spread (e.g., utilize volunteers, encourage agencies to submit info on weeds to WeedMapper)
Develop plans for post-fire weed abatement
Education and outreach to residents and visitors about noxious weed spread and treatments
Expand and enforce regulations for noxious weed mitigation
Work with researchers to develop a custom fuel model for gorse and Scotch brome to improve fire behavior predictions
High (2.1 - 3.0)
Medium (1.1 - 2.0)
Low (0 - 1.0)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Average priority (higher value = higher priority)


Fuel treatments and management of woody material
Develop and maintain fuel breaks around communities in high-risk areas
Remove fuel around critical infrastructure (e.g., under powerlines, around comms towers, around fire stations, etc.) and cultural sites
Form pile burn cooperatives so residents can get certified burn manager education and help each other burn slash
Expand capacity in county for chipping, bio-burning, and bio-fuel
Waiver for chipping or slash drop-off for low-income residents
Explore use of fungi (mycelium) injections to help breakdown fuels
High (2.1 - 3.0)
Medium (1.1 - 2.0)
Low (0 - 1.0)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Average priority (higher value = higher priority)

10. Appendix C. Community Survey Methodology & Results

10.a. Survey Methodology

The public community survey for Coos County was developed by the Ember Alliance with background from The Wildfire Research Center (WiRē) and The Ember Alliance (TEA) surveys. The survey was posted on the Coos County Sheriff's website and Face Book page by Steering Committee team members. The aim of the survey was to provide vital information and views about the concerns of community members living in a wildfire prone environment and to guide the prioritization of mitigation projects in the district.

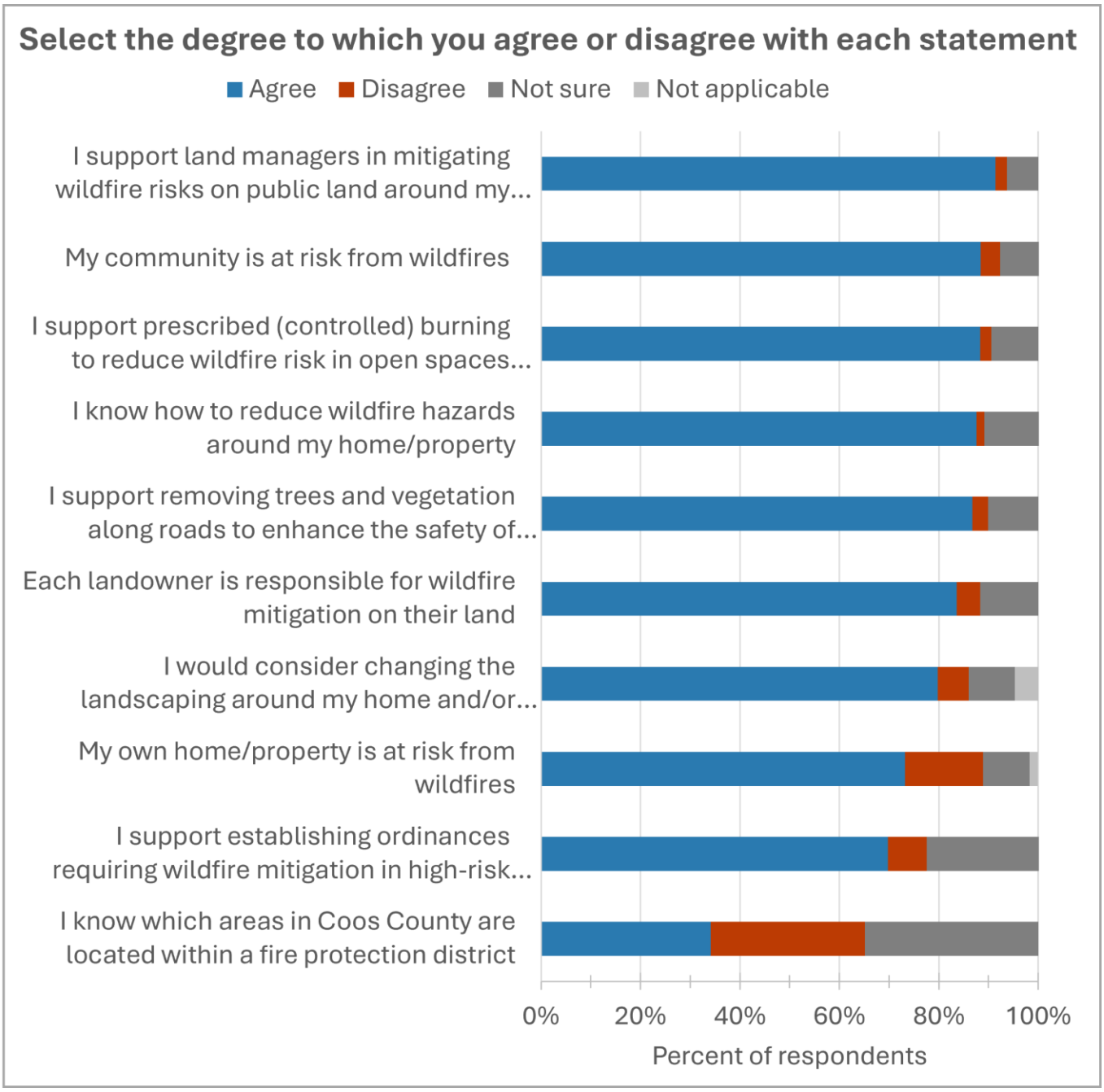
The survey was publicly available from March 28, 2025, to May 23, 2025, through Microsoft Forms. The Coos County CWPP Steering Committee disseminated the survey at the Coos County in-person partner meeting in Coos Bay, the Coos County Sherifs Office website, fire district events, various community events, and through social media. There were 129 (n=129) respondents, most of whom were full-time residents of Coos County.

The Ember Alliance summarized the survey data and shared with the Coos County CWPP Steering Committee. Results and comments from the survey were used to inform the priorities in the CWPP.

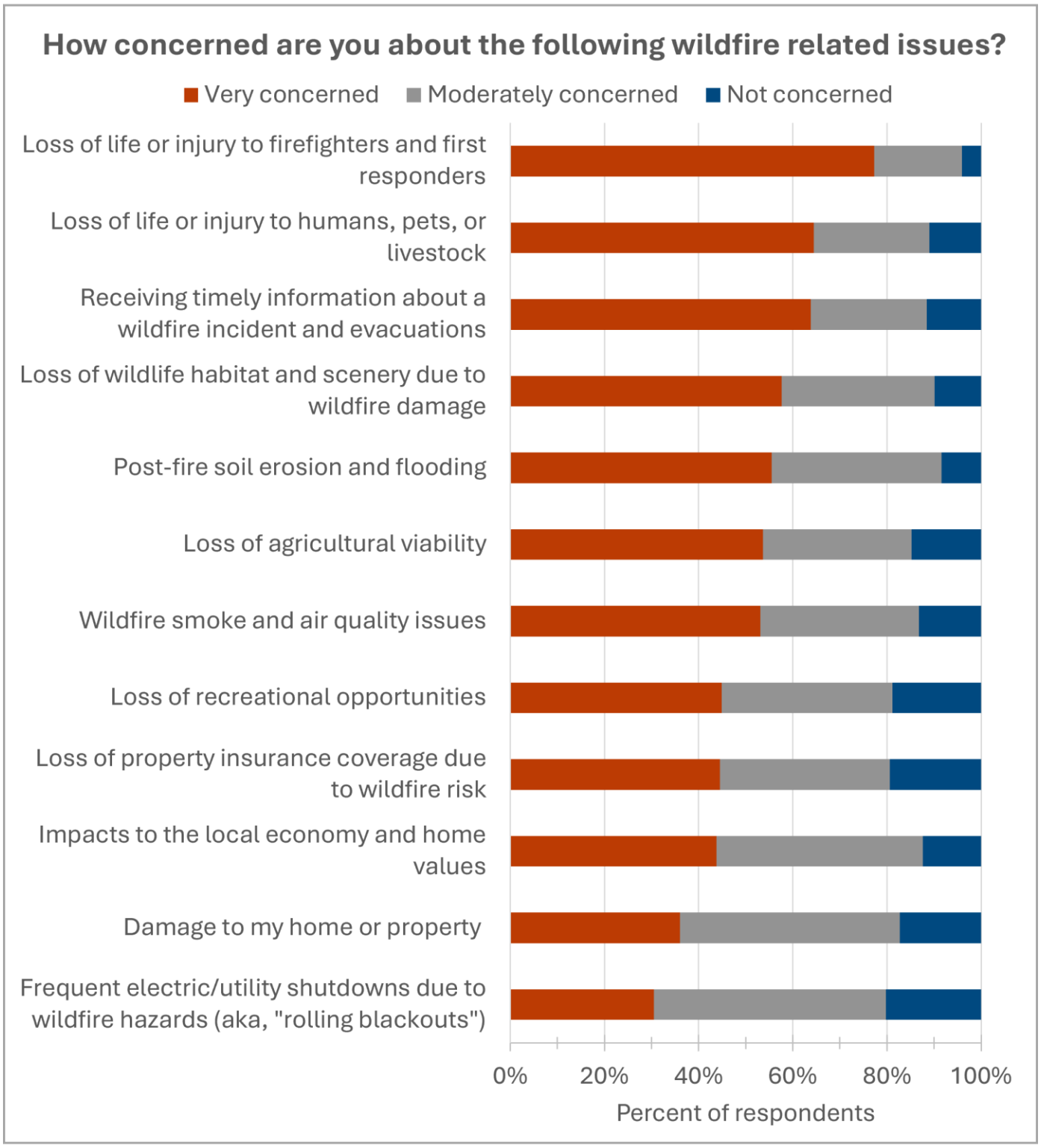
10.b. Survey Questions and Answers

Coos County CWPP Community Wildfire Preparedness Survey

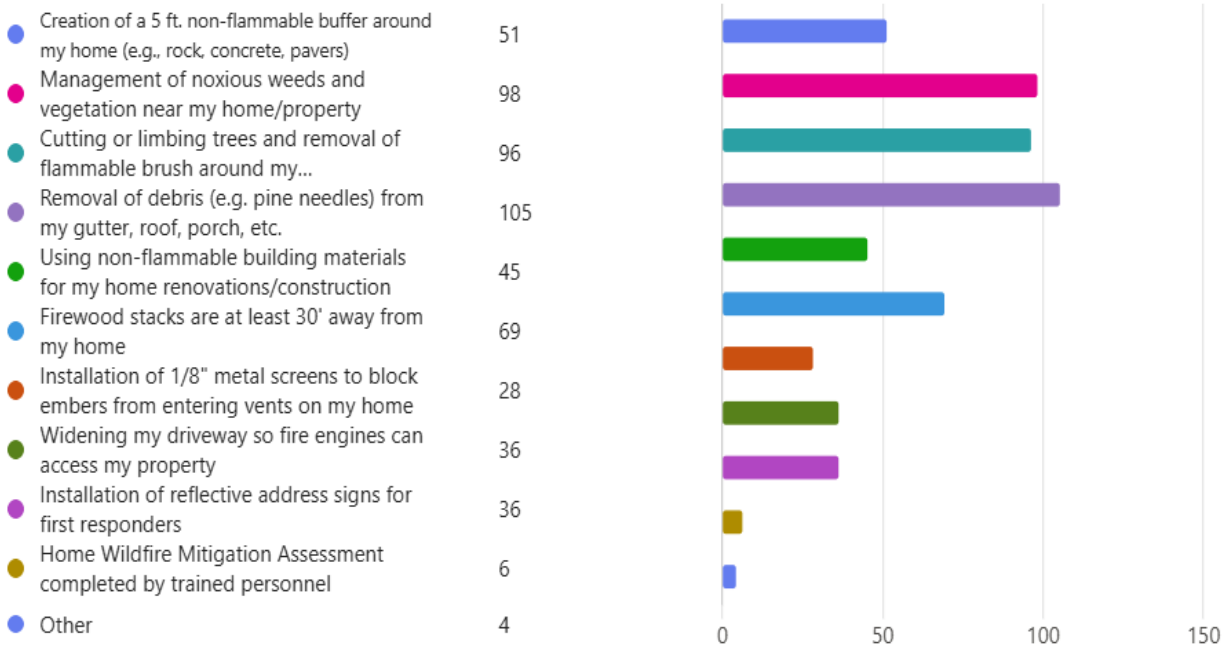
1. Please read each statement and select the degree to which you agree or disagree with it.



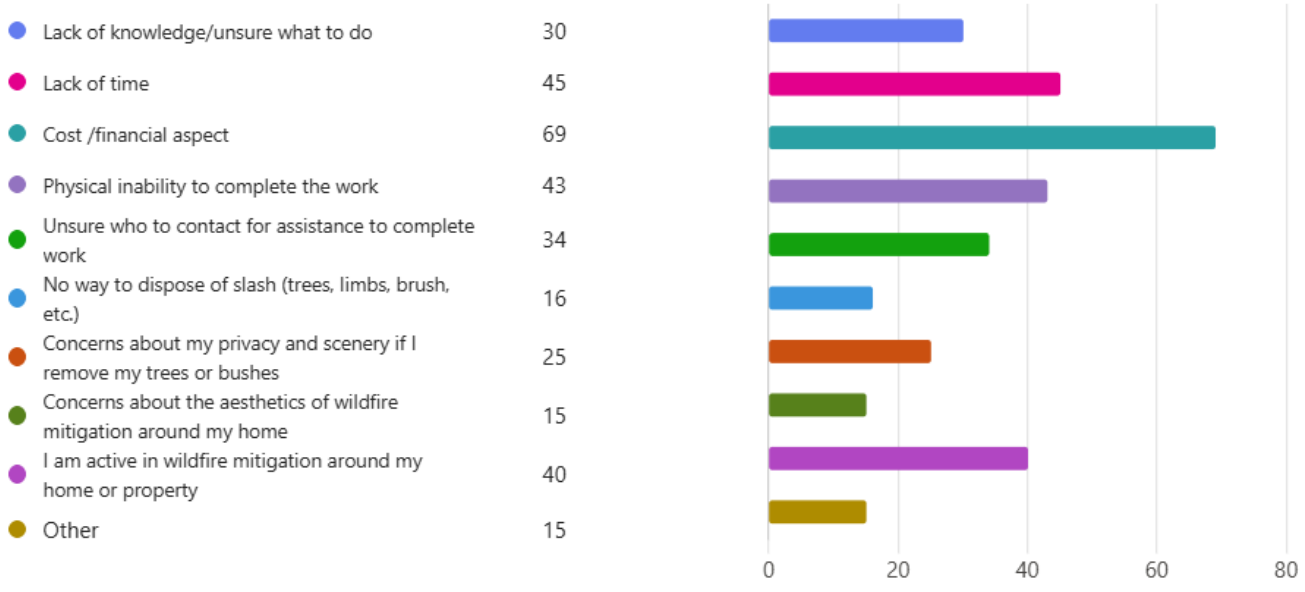
2. How concerned are you about the following wildfire related issues?



3. I have completed the following work on my home/business/property to lessen the risk of wildfire: Check all that apply.

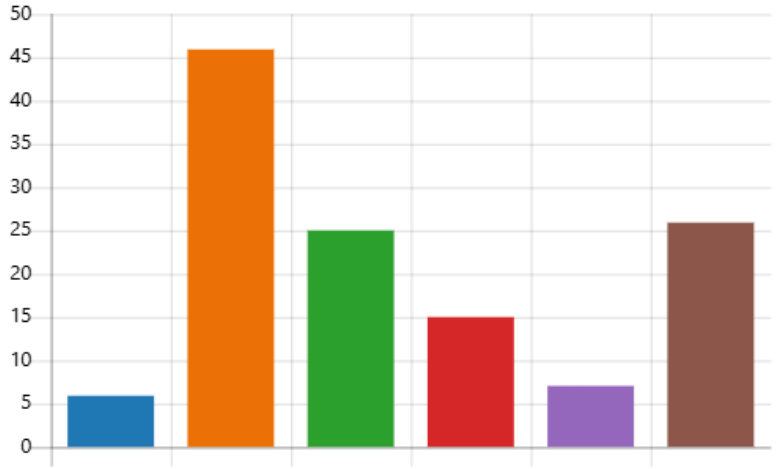


4. What are the obstacles that have stopped you from completing wildfire mitigation? Check all that apply.



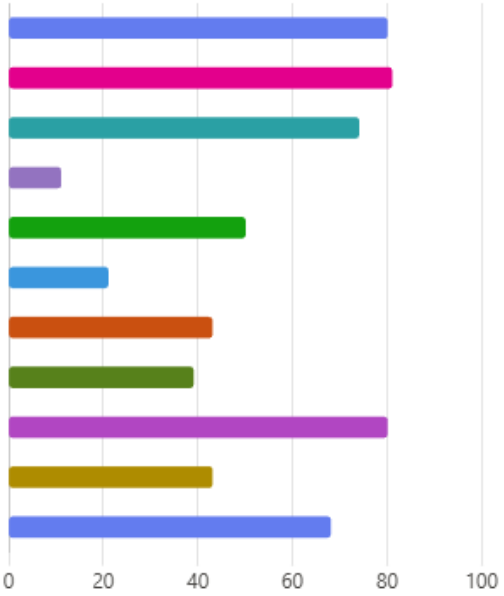
5. How much are you willing to spend annually on wildfire mitigation on your property or home?

Nothing	6
$1 - $499	46
$500 - $999	25
$1,000 - $2,000	15
$2,000+	7
I am financially unable to spend e...	26



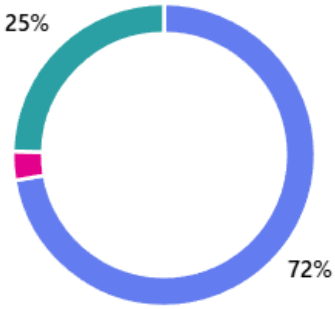
6. Which of the following would encourage you to perform wildfire mitigation? Check all that apply.

Financial assistance to complete wildfire mitigation activities	80
Free property assessment by a wildfire specialist to identify my wildfire risks	81
Site-specific checklist of priorities and actions I can use to reduce wildfire hazards	74
Wildfire safe landscaping techniques that beautify my home and yard	11
Educational programs or community events for home wildfire mitigation	50
Individual or community recognition for completing wildfire mitigation (ie: FireWise USA Community)	21
County or State enforcement of wildfire, building, and/or maintenance codes	43
City or County ordinances regarding wildfire hazard mitigation	39
Incentives from insurance companies for completing wildfire hazard mitigation	80
A list of recommended contractors for hire to complete mitigation work	43
Other	68



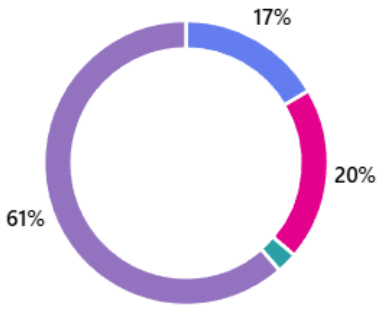
7. Do you have an evacuation plan and know where to evacuate to?

Yes, for my home	94
Yes, for my cabin/recreation property	4
No, I do not have a plan to evacuate	32



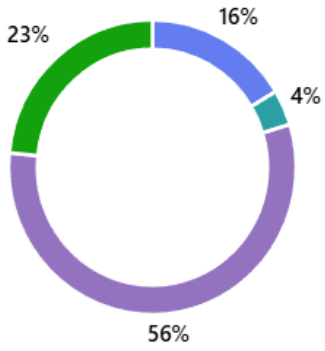
8. Have you and your family practiced evacuating your home within 15 minutes or less?

Yes, for people in my household	21
Yes, for people and pets in my household	25
Yes, for people, pets, and livestock on my property	3
No, I have not practiced evacuating	78



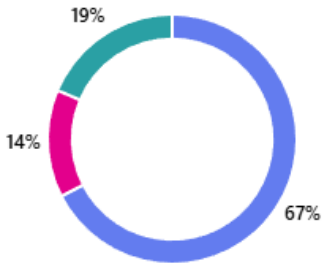
9. Do you have a plan for evacuating your pets or livestock if you are not at home?

Yes, I have a plan for evacuating my pets if I am not home	21
Yes, I have a plan for evacuating my livestock if I am not home	0
Yes, I have a plan for evacuating my pets and livestock if I am not home	5
No, I have no plan for evacuating pets or livestock if I am not home	72
Not applicable	30

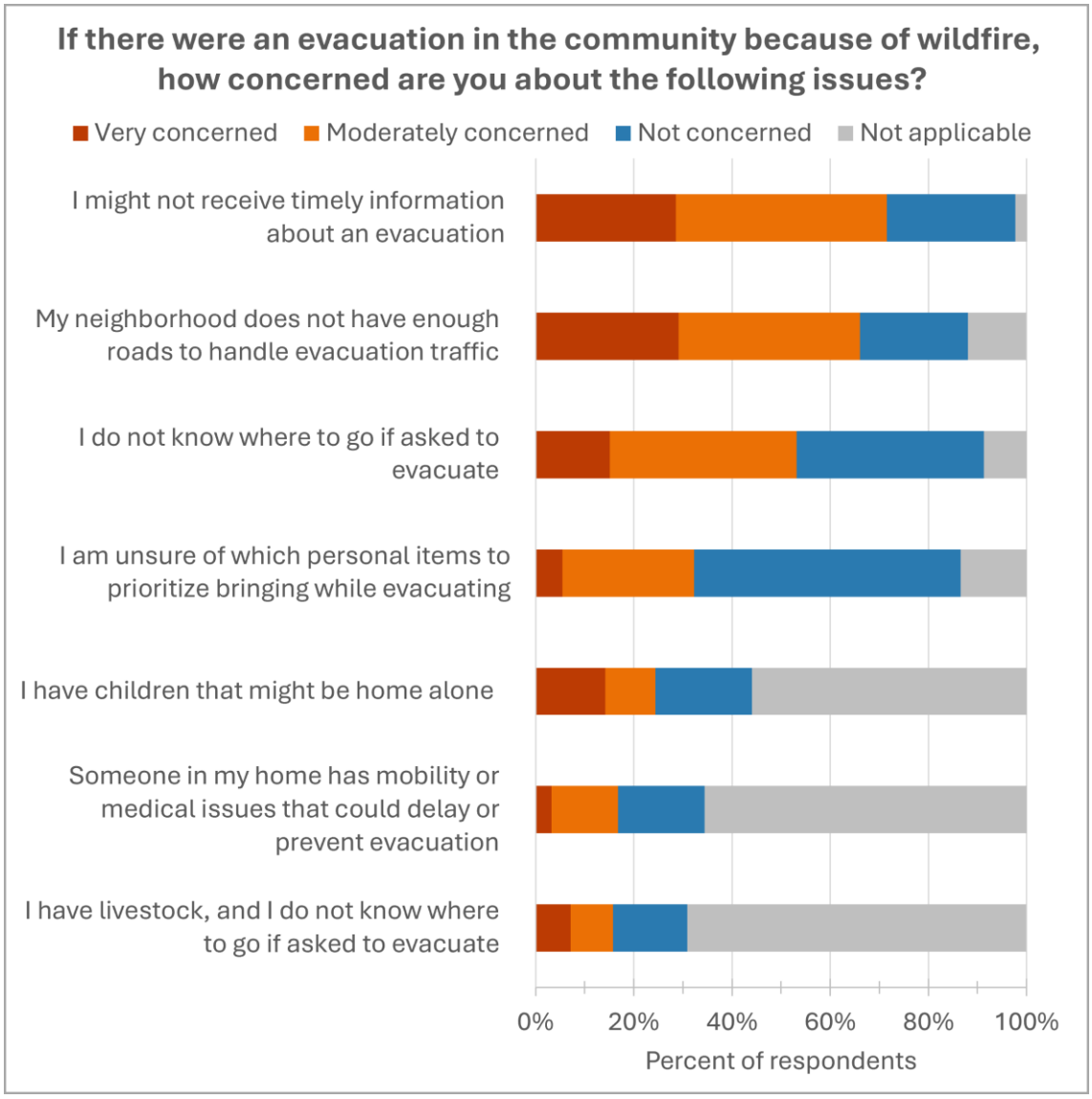


10. Have you signed up for the "*Coos County Emergency Mass Notification System via Everbridge*" emergency alerts system to receive notifications during wildfire incidents?

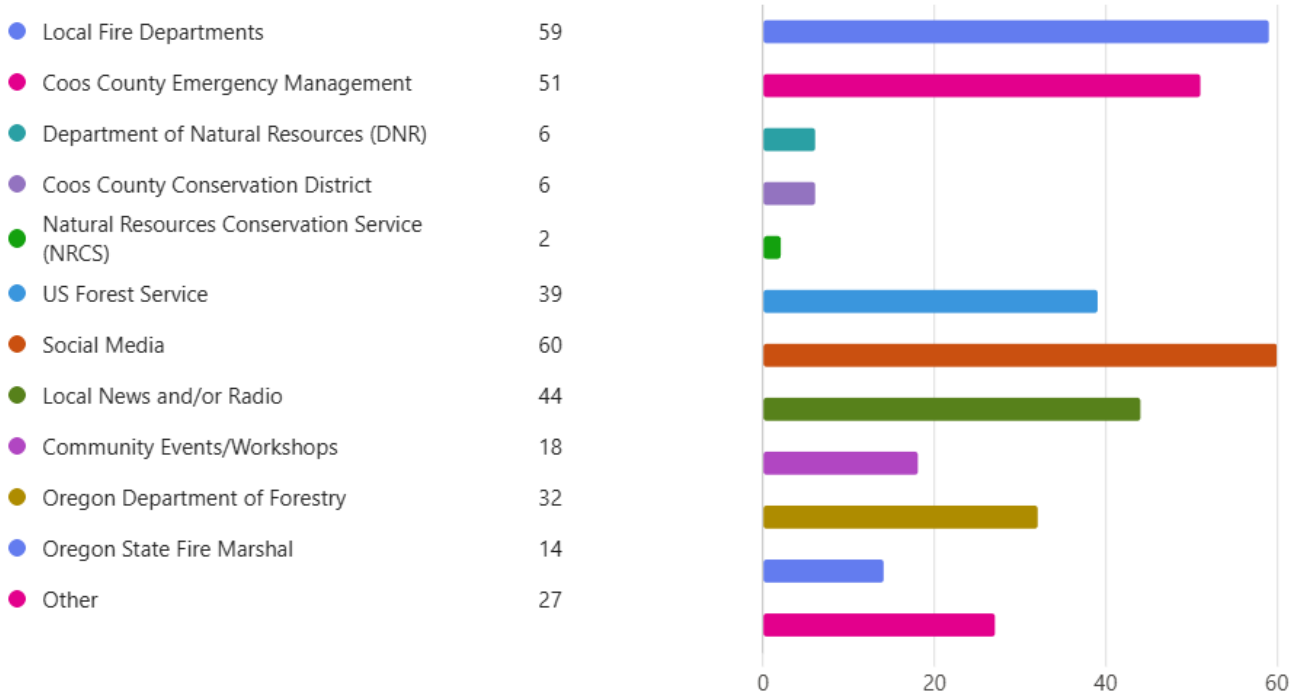
Yes	87
No	18
I have never heard of this notification program: https://member.everbridge.net/892807736724057	24



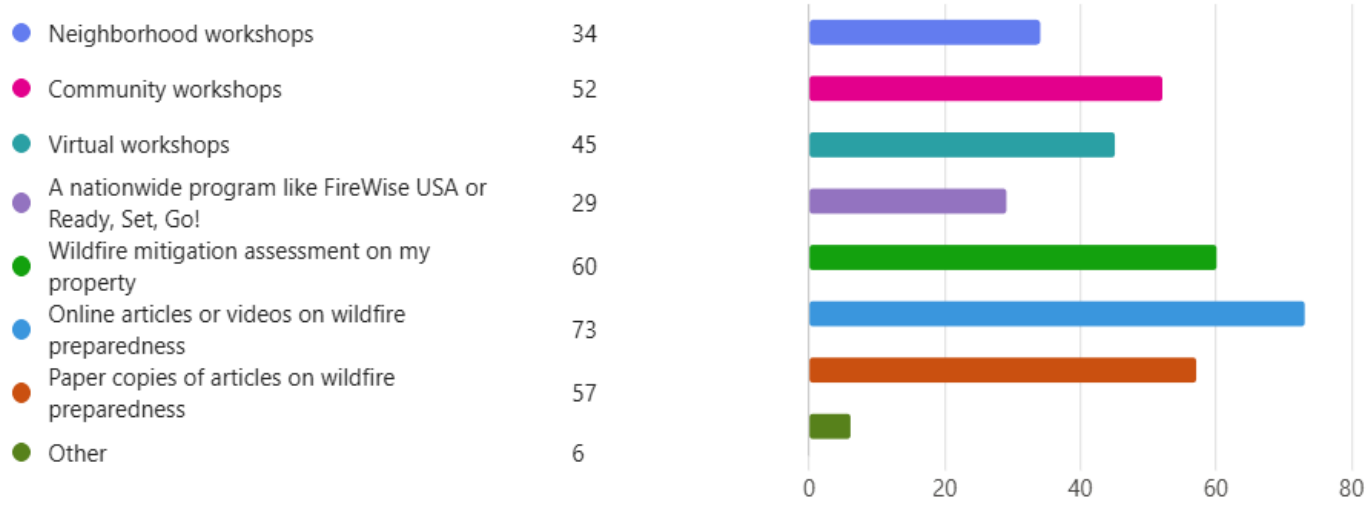
11. If there were an evacuation in the community because of wildfire, how concerned are you about the following issues?



12. Where have you found or received wildfire information? Check all that apply.

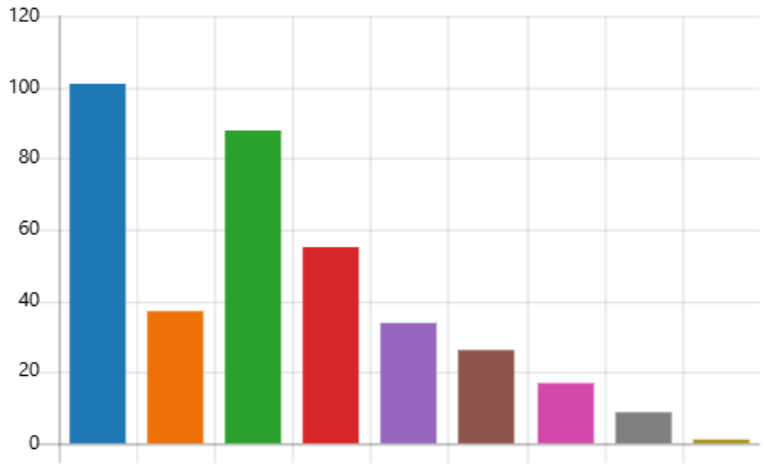


13. Which of the following educational opportunities would you participate in to learn about wildfire risk mitigation and emergency preparedness? Check all that apply.



14. What methods are best to communicate with you? Check all that apply.

Email	101
Phone	37
Text Message	88
Social Media	55
Postcards or Mailers	34
Local Radio Stations	26
Local News Program	17
Local Newspapers	9
Other	1

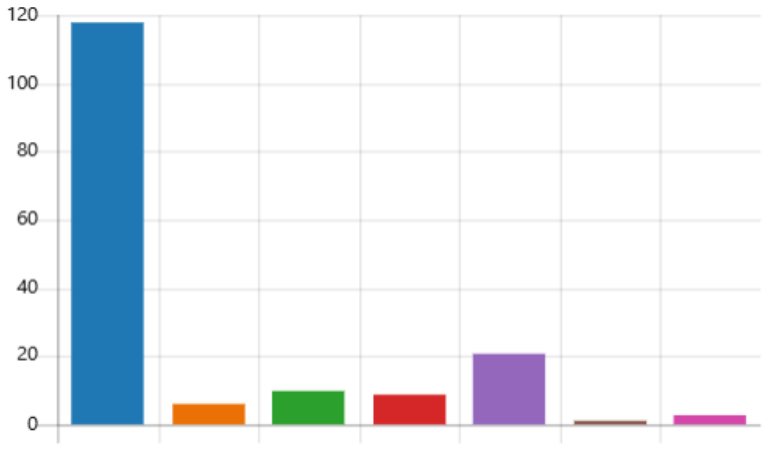


15. What area of Coos County do you live in?

N=129 Individual responses. 22% answered “Coos Bay” for this question.

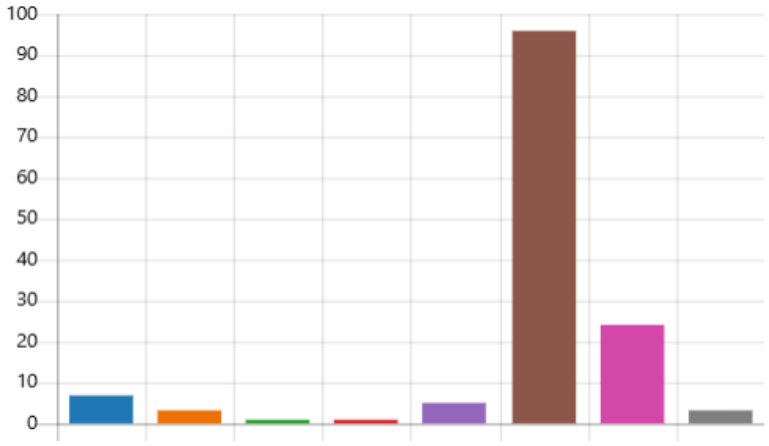
16. What is your residency status in Coos County? Check all that apply.

Full-time resident	118
Part-time or seasonal resident	6
Owner of undeveloped land or lo...	10
Owner of agricultural land	9
Owner of forestland	21
Owner of rangeland	1
Other	3



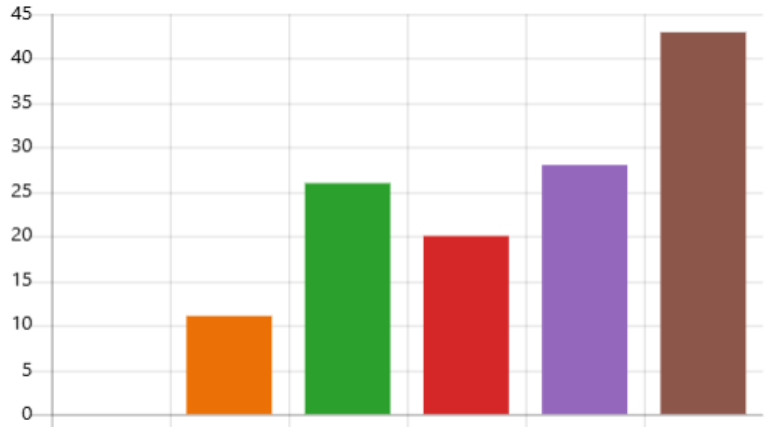
17. Please identify your race. Check all that apply.

American Indian or Alaska Native	7
Asian	3
Black or African American	1
Native Hawaiian or Other Pacific I...	1
Hispanic or Latino	5
White	96
Prefer not to say	24
Other	3



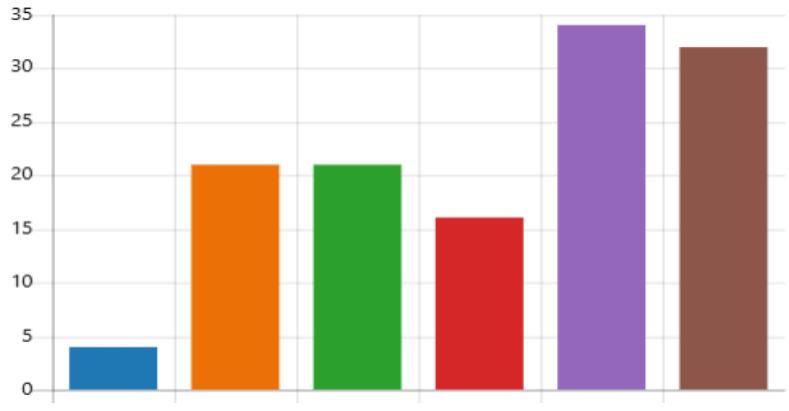
18. What is your age?

Under 18	0
18-34	11
35-44	26
45-54	20
55-64	28
65 and over	43



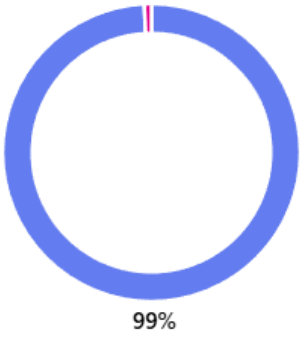
19. What is your annual household income?

Less than $20,000	4
$20,000 - $49,999	21
$50,000 - $74,999	21
$75,000 - $99,999	16
Over $100,000	34
Prefer not to say	32



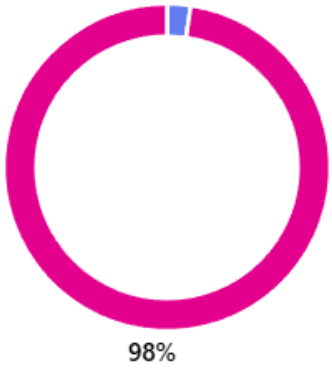
20. Do you have access to reliable transportation?

Yes, all or most of the time	128
Yes, some of the time	1
I rely on public transportation	0
No, do not have access to reliable transportation	0



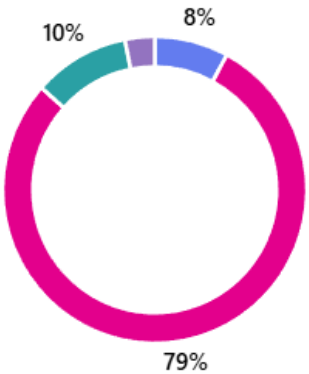
21. Is your home/property located within a mobile home / manufactured home community?

Yes	3
No	126



22. What type of home structure do you live in?

Modular	10
Site Built	100
Mobile Home	13
Condominium/Apartment	4

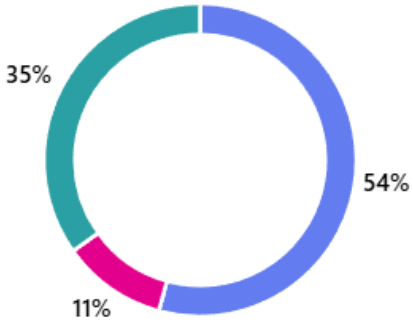


23. Does anyone in your household have mobility restrictions or special access needs (for example, a physical disability) which could inhibit or delay an emergency evacuation?

Yes	15
No	100
Sometimes	14

24. Is your home and/or property located within a Coos County Fire Protection District?

Yes	70
No	14
Not sure	45



25. If your home and/or property is NOT located within a Coos County Wildland Fire Protection District, would you be interested in joining or forming a Protection District for your community?

Yes	10
No	7
Maybe	18
Not sure	28
Not Applicable	58