

Malheur County, OR

Community Wildfire Protection Plan

2025 PLAN UPDATE



Photo Source: Malheur County Emergency Management Facebook Page.

Malheur County Emergency Management

151 "B" St. West
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(541) 473 – 5120



Prepared By:
Northwest Management, Inc.



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ACKNOWLEDGEMENTS

This Community Wildfire Protection Plan represents the efforts and cooperation of several organizations and agencies working together to improve preparedness for wildfire events while reducing factors of risk.

The following organizations and agencies participated in the planning process:



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FOREWORD

The process of updating the 2009 Community Wildfire Protection Plan (CWPP) began in June 2023 with the goal of helping the community clarify and refine its priorities for the protection of life, property, and critical infrastructure in the wildland–urban interface (WUI) on both public and private land. The planning process guides community members and leaders through valuable discussions regarding management options and implications for the surrounding landscape. Local fire service organizations help define issues that may place the county, communities, and/or individual homes at risk. Through the collaboration process, the CWPP planning team discusses potential solutions, funding opportunities, and regulatory concerns and documents their resulting recommendations in the CWPP. The CWPP planning process also incorporates an element for public outreach. Public involvement in the development of the document not only facilitates public input and recommendations but also provides an educational opportunity through interaction of local wildfire specialists and an interested public.

The idea for community-based wildfire planning and prioritization is neither novel nor new. However, the incentive for communities to engage in comprehensive forest planning and prioritization was given new and unprecedented impetus with the enactment of the Healthy Forests Restoration Act (HFRA) in 2003. This landmark legislation includes the first meaningful statutory incentives for the US Forest Service (USFS) and the Bureau of Land Management (BLM) to consider the priorities of local communities as they develop and implement forest management and hazardous fuel reduction projects. For a community to take full advantage of this new opportunity, it must first prepare a CWPP.

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SIGNATURES OF APPROVAL

Oregon Department of Forestry

Justin Lauer

District Forester, Oregon Department of Forestry

Date

Adoption by the Malheur County Commissioners

Dan Joyce

Malheur County Judge

Date

Ron Jacobs

Malheur County Commissioner

Date

Jim Mendiola

Malheur County Commissioner

Date

1 INTRODUCTION

The purpose of a Community Wildfire Protection Plan (CWPP) is to aid in the facilitation of effective management and mitigation of risks associated with wildland fire. Through the development of a CWPP, wildfire hazard areas and areas of high risk are identified, fuels reduction projects are documented and prioritized, and various strategies to protect communities and vital infrastructure are explored. Given that rural areas often have limited resources and access to emergency services, a CWPP promotes coordinated efforts among local governments, fire departments, and landowners to enhance preparedness, increase resilience, and reduce wildfire-related damage.

1.1 MISSION STATEMENT

Malheur County is committed to reducing the risk of large wildfires in wildland urban interface areas with collaborative planning, restoration of fire adapted ecosystems, and prevention education that involves citizens, landowners, structural fire agencies, and local, state, and federal agencies of Malheur County. This working document will serve as a resource; it will provide information that will enhance community safety through hazard and risk reduction in the wildland urban interface.

1.2 GOALS AND OBJECTIVES

1. Identify areas at risk and their associated hazards:
 - Identify hazards that determine wildfire risk.
 - Evaluate areas to determine relative risk.
2. Reduce wildfire risk to identified areas:
 - Utilize widespread and consistent partnerships with citizens, stakeholders, and agencies.
 - Improve emergency response through training, acquisition of equipment, and improved access.
 - Promote and implement fire prevention education campaigns and activities.
3. Identify and treat hazardous fuels by priority:
 - Encourage communities to participate in development of strategies that will reduce wildfire risk.
 - Establish a process for the annual selection of ecosystem restoration projects within their respective jurisdictions.
4. Restore fire-adapted ecosystems:
 - Provide training and guidance to enable rapid assessments of burned lands and the implementation of stabilization techniques.

- Communities will encourage land management agencies to promote the control of invasive species and consider establishment of native seed and plant material.
5. Establish a monitoring and evaluation process:
- Review goals and update plan as needed or as new information becomes available.
 - Evaluate actions for effectiveness.

1.3 PURPOSE

The intent of this CWPP is to reduce the risk of wildfire and promote ecosystem health through identified mitigation actions. The plan also is intended to help reduce home losses, provide preventative education to residents and to better protect firefighters during wildfires.

1.4 IMPLEMENTATION OF DOCUMENT

The Malheur County Community Wildfire Protection Plan can be viewed as a stand-alone document; it will also serve as the wildfire section of the county's Natural Hazard Mitigation Plan. Both planning efforts include an assessment of hazard and risk. The Malheur County CWPP contains a more comprehensive quantitative and qualitative risk assessment for the county.

This document is designed to serve as a guide that identifies and recommends mitigation measures that could be implemented within the County. Additionally, this document is not an action plan and it, nor anyone involved in the planning process, will be accountable or liable for any potential future loss from wildfire. This document, once complete, will be used to gain funding to implement mitigation measures and to educate residents about identifying and reducing their own wildfire risk.

2 PLANNING PROCESS

2.1 THE PLANNING TEAM

The Malheur County Emergency Management Division led the planning effort alongside the Northwest Management, Inc. team. Project leadership then met and consulted with representatives of various county and city entities, fire departments and districts, state and federal agencies, and other types of stakeholders. Collectively, all individuals who participated in the planning process constituted the planning team for the 2025 update of the Malheur County CWPP.

Many members of the planning team were invited to participate at the inception of the project. Invitations to participate were primarily sent via email and notifications were provided in-person at Malheur County Local Emergency Planning Committee (LEPC) meetings. The LEPC served as an important means for building planning team membership.

Individuals who participated in the planning process are listed in Table 2-1. Malheur County Emergency Management will continue to notify these individuals/entities of future opportunities to review or update the CWPP.

Table 2-1) Personnel who participated in the 2025 update of the Malheur County Community Wildfire Protection Plan.

Name	Organization and Job Title
Rich Harriman	Malheur County Sheriff's Office
Dave LaChapelle	Deputy Fire Management Officer (Fuels) – Vale District Bureau of Land Management
Marisa Carney	Fire Planner – Bureau of Land Management
Al Crouch	Fire Management Specialist (Mitigation and Trespass) – Bureau of Land Management
Chris Paul	Community Wildfire Risk Reduction Specialist – Oregon State Fire Marshal
Travis Lock	Regional Mobilization Coordinator – Oregon State Fire Marshal
Katie Wollstein	OSU – Eastern Oregon Agricultural Research Center
George Martin	Fire Chief – Adrian RFD
Marvin Suell	Fire Chief – Nyssa FD
Clint Benson	Fire Chief – Ontario F&R; Ontario RFPD 7-302
Steve Castenada	Fire Chief – Payette RFD-Oregon
Jess Tolman	Fire Chief – Vale FD
Bud Fisher	Fire Chief – Weiser RFPD Annex-Oregon
Jaime Yturriondobeitia	Secretary/Treasurer – Blue Mountain Rangeland Fire Protection Association
Tom McElroy	Vale Rangeland Fire Protection Association
Adam Herrenbruck	Northwest Management Inc.
Tanner Paulson	Northwest Management Inc.
Erica Wimme	Northwest Management Inc.

2.2 PLANNING TEAM MEETINGS

Planning Team meetings were held once a month and coincided with the Malheur County LEPC working meetings. The kickoff meeting was held in July 2023 with subsequent meetings scheduled monthly as needed. These meetings served to facilitate the sharing of information and to lay the groundwork for the Malheur County CWPP update. Northwest Management, Inc. as well as other planning team leadership attended the meetings (in person or virtual) to provide the group with regular updates on the progress of the document and gather any additional information needed to complete the plan.

2.3 PUBLIC INVOLVEMENT

The public was made aware of the beginning of the plan update process through a news release that went out across the county, including on the Malheur Emergency Manager's Facebook Page. Planning team members were encouraged to spread the word about the planning process and to discuss the issue of wildfire in Malheur County to make the public more aware of the process without needing to become directly involved.

2.3.1 Idaho Power – Jordan Valley Open House

On April 29, 2025, representatives from the Malheur County CWPP planning team and OSFM hosted a table at an open house that Idaho Power convened for the public. Topics discussed at the event included Idaho Power's wildfire prevention efforts and safety tips for power outage situations. Information on the Malheur County CWPP was provided to attendees, including the purpose and need of the CWPP and how wildfire mitigation can make a difference in the county.

2.3.2 Vale ESD Office Public Meeting

On April 23, 2025, Malheur County Emergency Management hosted a public meeting at the Vale ESD Office. The meeting was advertised via word of mouth and an announcement on the Emergency Management Facebook page that was posted on March 25, 2025 (Figure 2-1). Presentation topics included the status of the CWPP update and some of the significant highlights of the 2025 CWPP, especially wildfire mitigation projects and how wildfire risk was assessed in the plan.



Malheur County Emergency Management

26 March · 🌐

...

We are having a public meeting to discuss the update of our Community Wildfire Protection Plan (CWPP). If you have recommendations on projects that local officials to do to help mitigate problem areas of Malheur County from wildfire, then your presence is requested.

If you would like to learn about some of the plans we are making for this year's wildfire season or if you'd like to learn about the "Ready, Set, Go" evacuation program, please plan on attending.

COME LEARN ABOUT WILDFIRE RESILIENCY IN YOUR COMMUNITY!

WHEN: APRIL 23, 2025

TIME: 6:00P - 7:30P

LOCATION: VALE ESD OFFICE (USE BACKDOOR ENTRANCE)

MALHEUR COUNTY IS UPDATING OUR
COMMUNITY WILDFIRE PROTECTION PLAN

PLEASE JOIN US FOR AN INFORMATIVE
DISCUSSION!

TOPICS COVERED

CWPP PLAN UPDATE AND CURRENT STATUS

WILDFIRE MITIGATION - WHY DO IT?

HOME AND LANDSCAPE HARDENING -
HOW TO BETTER YOUR HOME AND LAND
AGAINST WILDFIRE

VIRTUAL MEETING LINK:

DIAL IN OPTION:
ACCESS CODE: 302-974-901
PHONE #: +1(872) 240 - 3212



SCAN TO VISIT THE MALHEUR CO.
EMERGENCY MANAGEMENT
FACEBOOK PAGE!

Figure 2-1) Facebook advertisement for the public meeting held on April 23, 2025, at the Vale ESD office.

2.4 PLAN MAINTENANCE AND MONITORING

2.4.1 Schedule

The maintenance of this plan will be directed by the Malheur County Department of Emergency Management and coordinated with representatives of participating agencies. The annual maintenance of this CWPP will consist of a full document review and the reevaluation of priorities related to wildfire risk, hazards, capacity, and mitigation. Progress or effort made to advance mitigation action items will be documented. An annual review of mitigation priorities will be necessary as the completion of such projects will result in the reduction of risk and changes in the distribution of hazard areas throughout Malheur County. Changes to infrastructure and any new needs related to infrastructure should also be considered and, where necessary, reflected in the plan.

This plan should be reviewed and revised, if needed, annually with a full update occurring every five years. It is advised that full plan updates be initiated during year four of the current planning cycle, so participating jurisdictions do not risk a lapse in funding due to an expired plan.

2.4.2 Continued Public Involvement

All participating entities are dedicated to the continued involvement of the public in the wildfire mitigation planning process. The CWPP will be available on the Malheur County Emergency Management Division website and hardcopies will be available at the Malheur County Planning Department office and Malheur County public libraries. Members of the public are invited to review the CWPP and submit questions or comments about the plan or wildfire hazards to the Malheur County Emergency Management Division at any time. Emergency Management shall be responsible for receiving, tracking, and filing public comments pertaining to the Malheur County CWPP. Public comments will, at minimum, be considered for inclusion in the CWPP during the annual review process.

3 MALHEUR COUNTY PROFILE

3.1 HISTORY

Malheur County was created on February 17, 1887, from the southern portion of Baker County. It was first settled by miners and stockmen in the early 1860s. The discovery of gold in 1863 attracted further development, including settlements and ranches. Basques settled in the region in the 1890s and were mainly engaged in sheep ranching.

3.2 ECONOMY

Land use in Malheur County is predominately rangeland with irrigated farming in the northeast corner of the county which is an area known as Western Treasure Valley. These areas are the center of intensive and diversified farming. The local economy is largely supported by livestock and agriculture, food processing, recreation, hunting, wildlife viewing, white-water rafting, and camping. Historically, lumber processing and harvesting from the nearby Blue Mountains was important to some communities, such as Burns. However, these industries have declined with lower harvests from neighboring federal forests¹. Malheur County is the poorest county in Oregon with over 13% of its residents living in poverty.

Malheur County is the only county in Oregon that does not fall entirely within the Pacific time zone. Because of its economic relationship with Idaho, most of Malheur County observes Mountain Time while the largely unpopulated southern portion of the county, near McDermitt, observes Pacific Time. Malheur County is the only county in the United States that legally observes two different time zones.

Malheur County encompasses more than 6 million acres of land. Most land in the county is either managed by the Bureau of Land Management (73.6%) or it is privately owned (22.1%). Land ownership in the county is summarized in Table 3-1 displayed in Figure 3-1.

Table 3-1) Land ownership in Malheur County.

Ownership	Percent
Bureau of Land Management	73.6%
Indian Reservation	0.3%
National Wildlife Refuge	< 0.1%
Private or Non-Government	22.1%
State of Oregon Lands	4.0%
US Forest Service National Forest	< 0.1%

¹ <https://oregonconservationstrategy.org/ecoregion/northern-basin-and-range/>

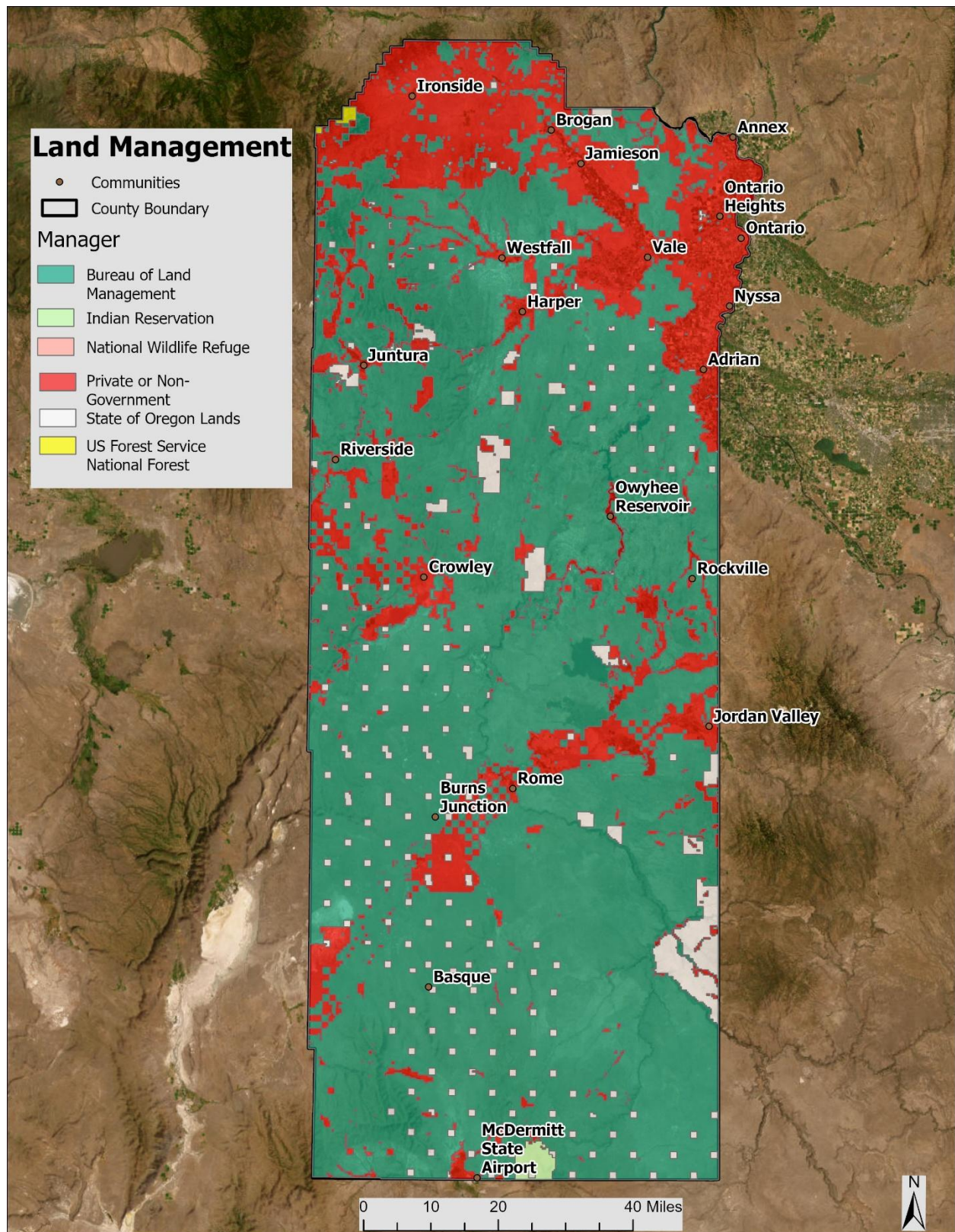


Figure 3-1) Landownership in Malheur County.

3.3 GEOGRAPHY & CLIMATE

This section is largely based on information from the Northern Basin and Range page of the Oregon Conservation Strategy website². Refer to the Oregon Conservation Strategy website for more information about the Northern Basin and Range ecoregion.

According to the U.S. Census Bureau, the county has a total area of 25,719 km² (9,930 mi²). Approximately 99.6% of the county (25,607 km² or 9,887 mi²) is land while the remaining 0.4% (111 km² or 43 mi²) is water.

Malheur County falls within the Northern Basin and Range ecoregion which covers the southeastern portion of the state, from Burns south to the Nevada border and from the Christmas Valley east to Idaho. The Northern Basin and Range name describes the landscape which is characterized by numerous flat basins separated by isolated mountain ranges. Mountains in the ecoregion generally feature gradual slopes on one side and steep basalt rims and cliffs on the other side. The Owyhee Uplands consist of a broad plateau cut by deep river canyons. Elevations range from 2,070 feet near the Snake River to more than 9,700 feet on the Steens Mountain.

The Northern Basin and Range is Oregon's driest ecoregion and it is marked by extreme ranges of daily and seasonal temperatures. Much of the ecoregion receives less than 15 inches of precipitation per year, although mountain peaks receive 30-40 inches per year. The extreme southeastern corner of the state has desert-like conditions, with annual precipitation of only 8-12 inches. Runoff from precipitation and mountain snowpack often flows into low, flat playas where it forms seasonal shallow lakes and marshes.

Sagebrush communities dominate the landscape. Due to the limited availability of water, sagebrush is usually widely spaced and associated with an understory of forbs and perennial bunchgrasses, such as bluebunch wheatgrass and Idaho fescue. Woodlands are rare, but aspen and mountain mahogany can be more widespread in the Trout Creeks, Steens Mountain, Pueblo Mountains, Oregon Canyon Mountain, and Mahogany Mountains. Throughout the ecoregion, soils are typically rocky and thin, low in organic matter, and high in minerals.

3.4 TOURISM AND RECREATION

Tourism has become a large component of the county's economy in recent years. Water-based recreational opportunities, including whitewater rafting and fishing, account for most tourism in the County. Other popular recreational opportunities throughout Malheur County include boating, camping, hunting, snowmobiling, rock collecting, and other outdoor recreation activities. Tourists are especially attracted to the various parks, Leslie Gulch,

² <https://oregonconservationstrategy.org/ecoregion/northern-basin-and-range/>

Snake River, Owyhee River, Owyhee Reservoir, and the Succor Creek area. These attractions bring in numerous visitors and travelers from outside Malheur County during certain times and seasons. Malheur County is also a major traffic hub for travelers passing through eastern Oregon.

3.5 INCORPORATED COMMUNITIES

Adrian - near the confluence of the Snake River and the Owyhee River. The population was 187 at the 2020 census.

Jordan Valley - was named after Jordan Creek, a tributary of Owyhee River, which runs through the town. The population was 249 at the 2020 census.

Nyssa - located along the Snake River on the Idaho border, in the region of far eastern Oregon known as the "Treasure Valley". The population was 3,180 at the 2020 census.

Ontario - is the largest city in Malheur County, Oregon, United States. It lies along the Snake River at the Idaho border. As of the 2020 census, the city population was 11,127.

Vale - about 12 miles (19 km) west of the Idaho border. It is at the intersection of U.S. Highways 20 and 26. Vale was selected as Malheur's county seat in 1955, 68 years after the county was founded. As of the 2020 census, the city had a total population of 2,006.

3.6 UNINCORPORATED COMMUNITIES

Arock - one of several places in southeast Oregon that was settled by Basque herders. Arock was supposedly named in 1922 for a large rock bearing Native American petroglyphs in the vicinity. Brogan - founded by D. M. Brogan in 1909, and when a post office was established in the locality on April 23 of that year, it was named for him. Brogan is located on the north end of the now-abandoned Union Pacific Railroad branch line from Vale.

Danner - named after J.H. Danner, one of the pioneer settlers in the community. The old Idaho-Oregon-Nevada highway ran through Danner, though the town is now off the main road and considered a ghost town.

Juntura - on U.S. Route 20. The word juntura is Spanish for "junction", and the community was named for its proximity to the confluence of the Malheur River with its north fork.

McDermitt, Nevada-Oregon - an unincorporated community straddling the Nevada-Oregon border, in Humboldt County, Nevada and Malheur County, Oregon.

Rome - named for some peculiar geologic formations that suggested the ruined temples of Rome, Italy.

Other Communities of Interest – the committee responsible for the development of this plan also identified other communities that shared a common infrastructure or characteristic. Those communities included Annex, Basque Station, Burns Junction, Crowley, Harper, Ironside, Owyhee Reservoir, Riverside, and Rockville.

3.7 POPULATION

The most current set of population data available for Malheur County is the 2020 census published by the U.S. Census Bureau. In 2020, Malheur County had a reported population of 31,571. The 2024 American Community Survey (ACS) population estimate was 32,315. Estimates by decade, since the year 2000, indicate that the population of the county has changed very little. The table below (Table 3-2) expresses the ten-year census reports for the cities and the county, along with 2023 population estimates from ACS. Malheur County contains five incorporated cities (Adrian, Jordan Valley, Nyssa, Ontario, and Vale) and several unincorporated communities (Arock, Brogan, Danner, Juntura, McDermitt and Rome, etc.). Population data is not available for most unincorporated communities.

Ontario, located in the northeast corner of the county, is the largest city, having a reported population of 11,645 in 2020. The county-seat, Vale, is located forty-eight miles West of Ontario. The reported 2020 population for Vale was 1,894.

Table 3-2) Malheur County Population Data from the US Census Bureau and the 2023 American Community Survey 5-Year estimates³.

City	2000	2010	2020	2023 est.	2024 est.
Malheur County	31,615	31,313	31,571	32,044	32,315
Adrian	147	177	157	221	NA
Jordan Valley	239	181	130	163	NA
Nyssa	3,163	3,267	3,198	3,220	NA
Ontario	11,127	11,366	11,645	11,866	NA
Vale	1,968	1,874	1,894	2,259	NA
Brogan	NA	90	97	22	NA
Juntura	-	57	39	20	NA
McDermitt (NV)	269	172	124	42	NA

3.8 DEMOGRAPHICS

According to the 2023 ACS estimates, the median age of residents in Malheur County was 36.2 year of age. Approximately 17.0% of residents are age 65 years or older and 15.1% have a disability. Residents who are foreign born represent 7.7% of the population and 20.7% of

³ U.S. Census Bureau – Malheur County, Oregon:
https://data.census.gov/profile/Malheur_County,_Oregon?g=050XX00US41045#business-and-economy

the population speaks a language other than English at home. New residents, or those who moved to Malheur County within the last year, represent 5.3% of the population. This information is summarized in Table 3-3; information for incorporated and unincorporated communities was also included if it was available. Some of these population characteristics may have implications for community preparedness and emergency response efforts.

Table 3-3) Demographic data at the county and community level for Malheur County, OR. Values are based on the 2020 Decennial Census and 2023 American Community Survey 5-year estimates³.

Jurisdiction	Median Age	Other Language*	Foreign Born Population	Older Population [†]	Disabled Population	Residential Mobility [‡]
Malheur County	36.2	20.7%	7.7%	17.0%	15.1%	5.3%
City of Adrian	48.3	27.8%	33.9%	26.2%	10.0%	0.0%
City of Nyssa	27.7	43.0%	16.4%	12.9%	10.3%	5.7%
City of Ontario	35.4	24.2%	6.6%	19.9%	17.3%	7.0%
City of Vale	32.9	16.3%	4.6%	18.0%	20.9%	3.5%
City of Brogan	66.7	0.0%	0.0%	68.2%	45.5%	0.0%
City of Juntura	63.5	0.0%	0.0%	45.0%	25.0%	5.0%
City of McDermitt	46.8	0.0%	0.0%	40.5%	59.5%	0.0%

***Other Language:** Language other than English spoken at home.

[†]**Older Population:** 65 years and older.

[‡]**Residential Mobility:** Moved from a different state in the last year.

3.9 SOCIOECONOMICS

According to 2023 ACS data, there are an estimated 11,615 housing units in Malheur County (Table 3-4). Most housing units are in the city of Ontario. The rate of housing unit occupancy for the county is reported to be approximately 90.4% and the rate of homeownership is 63.4%. For the period 2019 to 2023, the median value of an owner-occupied housing unit in Malheur County was \$221,300. The median cost of rent in Malheur County was \$819.

Table 3-4) Housing data at the county and community level for Malheur County, OR. Values are based on the 2020 Decennial Census and 2023 American Community Survey 5-year estimates³.

Jurisdiction	Total Housing Units	Rate of Occupancy	Rate of Homeownership
Malheur County	11,615	90.4%	63.4%
City of Adrian	76	89.5%	77.8%
City of Nyssa	1,134	90.3%	64.0%
City of Ontario	4,682	94.1%	-
City of Vale	769	92.7%	58.0%
City of Brogan	58	79.3%	-
City of Juntura	35	80.0%	-
City of McDermitt	68	79.4%	100.0%

At 17.8%, the poverty rate in Malheur County is 5.6% higher than the poverty rate for the state of Oregon (12.2%) (Table 3-5). The demographic group associated with the highest rate of poverty (21%) in the county is the “Under 18 years” (of age) group. Comparatively, 17.3% of the “18 to 64 years” (of age) demographic group is in poverty, but that group represents a much greater proportion of the county population (57.1%).

Table 3-5) Poverty data for Malheur County, OR. Values are based on 2023 American Community Survey 5-year estimates³.

Population	% in Poverty	
In Oregon	12.2%	
In Malheur County	17.8%	
Poverty by Age (Malheur County)	% in Poverty	% of Population
Under 18 years	21.0%	25.6%
18 to 64 years	17.3%	57.1%
65 years and over	14.6%	17.3%

The median household income for Malheur County is just under \$50,000 which is a little more than \$30,000 under median household income for the state of Oregon (Table 3-6). Median household income in Malheur County ranges from just over \$30,000 (nonfamily households) to just under \$78,000 (married couple families).

Table 3-6) Income statistics for Malheur County, OR. Values are based on 2023 American Community Survey 5-year estimates³.

Population	Median Household Income
In Oregon	\$80,160
In Malheur County	\$49,902
Types of Family (Malheur County)	Median Income
Families	\$65,918
Married-couple families	\$77,680
Nonfamily households	\$30,463

The workforce in Malheur County is largely made up of individuals employed in the private sector (64%) and by local, state, and federal government (19%). Most workers are in management, business, science, and arts occupations (28%) and most are employed in industries related to educational services, health care, and social assistance (20.3%). Workforce statistics for Malheur County are included below in Table 3-7.

Table 3-7) Worker Class, Occupation, and Industry statistics for Malheur County, OR. Values are based on 2023 American Community Survey 5-year estimates³.

Class of Worker	Percentage
Employee of private company workers	64%
Self-employed in own incorporated business workers	3.2%
Private not-for-profit wage and salary workers	6.3%
Local, state, and federal government workers	19.0%
Self-employed in own not incorporated business workers and unpaid family workers	7.6%
Occupation	Percentage
Management, business, science, and arts occupations	28.4%
Service occupations	19.9%
Sales and office occupations	19.6%
Natural resources, construction, and maintenance occupations	17.3%
Production, transportation, and material moving occupations	14.9%
Industry	Percentage
Educational services, healthcare, and social assistance	20.3%
Agriculture, forestry, fishing and hunting, and mining	13.7%
Retail trade	13.3%
Arts, entertainment, recreation, accommodation, and food services	12.1%
Manufacturing	10.6%
Public administration	6.8%
Professional, scientific, management, administrative, and waste management services	5.8%
Construction	4.6%
Transportation and warehouse, and utilities	4.5%
Finance, insurance, real estate, and rental and leasing	2.7%

4 WILDLAND FIRE HAZARD PROFILE

This section provides an overview of wildland fire activity in Malheur County. This includes a review of the fire environment (weather, topography, and fuels), a historical perspective of wildfire activity, and an analysis of changes in the distribution and composition of fuels as predicted by various models. When considered together, these variables help to explain modern wildfire risk, hazards, and trends observed in Malheur County.

4.1 WILDLAND FIRE CHARACTERISTICS

In general, wildland fire behavior describes how fire reacts to available fuels, local topography, and current weather conditions. The relationships between these three components are dynamic; changing one condition can often exacerbate the effects that the other conditions have on fire behavior. As such, fire behavior is often modeled as a triangle with fuels, topography, and weather serving as the three sides (Figure 4-1). Understanding the relationships between the fire behavior components has important implications for not only managing an active wildfire but also mitigating wildfire risk. Since fuel is the only component that can be managed directly, management decisions regarding fuel types and fuel loading across the landscape need to be made based on characteristics that are inherent of the region, primarily climate and topography. Strategic fuel breaks, conservation and restoration of native species, and prescribed burns are examples of management activities that can reduce wildfire risk and simplify the process of assessing potential wildfire behavior.

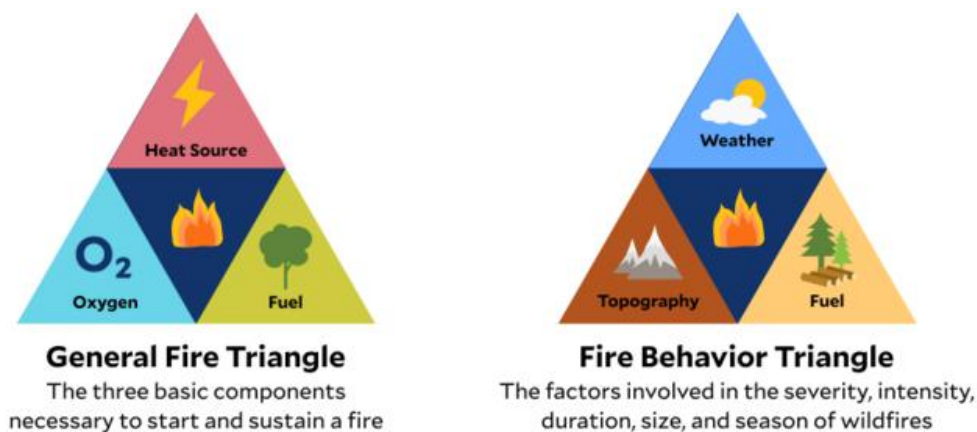


Figure 4-1) Examples of fire triangles⁴. The left triangle is a general representation of the three elements required to ignite and sustain a fire. The right triangle is a representation of the three elements that dictate wildland fire behavior.

⁴ Yale Sustainability. Yale Experts Explain Wildfires. Accessed online at <https://sustainability.yale.edu/explainers/yale-experts-explain-wildfires>

A brief description of each of the fire behavior elements follows to illustrate their effect on fire behavior.

4.1.1 Weather

Fire behavior is largely influenced by environmental conditions and weather. Wind speed, temperature, and relative humidity are all environmental factors that determine the rate at which fuels dry, and, in turn, how susceptible they are to ignition. These environmental parameters can be analyzed to determine current fuel conditions and generate estimates of how likely or easily fuels will ignite and the potential rate at which fire will spread. Once a wildfire has started, its behavior is further determined by atmospheric stability and local and regional weather. As temperature, wind speed, wind direction, and precipitation all influence fire behavior, weather is the most difficult component of the fire triangle to predict and interpret.

Malheur County has a hot, dry season in late summer and early fall that often produces high temperatures and low levels of humidity. During that time of the year the risk of large wildfires is elevated, particularly for severe fires that exhibit extreme behavior. Malheur County is also affected by strong thunderstorms and lightning storms during late summer months which can produce multiple wildfire starts. Situations with multiple starts often strain wildland firefighting resources as firefighters and equipment must be dispatched to multiple locations simultaneously.

4.1.2 Topography

Fires burning in similar fuel types will burn differently under varying topographic conditions. Topography alters heat transfer and localized weather conditions, which in turn influences vegetative growth and resulting fuels. Changes in slope and aspect can have significant influences on how fires burn. In general, north slopes tend to be cooler, wetter, and more productive sites. This typically results in heavy fuel accumulations, high fuel moisture, lower rates of curing for fuels, and lower rates of spread. In contrast, south and west slopes tend to receive more direct sun and have the highest temperatures, lowest soil and fuel moisture, and lightest fuels. The combination of light fuels and dry sites leads to fires that typically display the highest rates of spread. These slopes also tend to be on the windward side of mountains which means they are often “available to burn” for a greater portion of the year. Slope also plays a significant role in the rate of spread of a fire as fuels upslope from the flaming front are subjected to preheating which means that they readily combust as the fire draws closer. The preheating process is exacerbated as slope increases which results in greater rates of spread and increased flame lengths. Therefore, steep slopes with a south – southwest aspect generally promote intense fire behavior due to dry fuels and the likelihood of predominant, westerly winds.

Much of the county is characterized by a mix of hilly and mountainous terrain and flat valley bottoms. Fire behavior is highly variable across different aspects and slopes in the rugged parts of the county while wind-driven fires in the valleys can move at speeds of up to 30 mph. As described above, the complex terrain of the county and potential for extreme fire behavior presents many challenges for wildland firefighters.

4.1.3 Fuels

In the context of wildfire, fuels describe any organic material, dead or alive, found in the fire environment. Grass, brush, branches, logs, logging slash, forest-floor litter, and conifer needles are all examples of fuel types found in the fire environment. The physical properties and characteristics of fuels govern how fires burn. Fuel loading, size and shape, moisture content, and continuity and arrangement all influence fire behavior. Small fuels such as grass, needle litter, and other fuels less than a quarter inch in diameter are most responsible for fire spread and are associated with higher rates of spread. Fine fuels, those with high surface to volume ratios, are considered the primary carriers of surface fire. As fuel size increases, the rate of spread tends to decrease due to a reduction in surface to volume ratio. Fires in large fuels generally burn at a slower rate but release much more energy and burn with much greater intensity. This increased energy release, or intensity, makes these fires more difficult to control.

Fuels are classified by diameter as that has important implications for fuel moisture retention. Moisture content of smaller fuels changes much more quickly than that of larger fuels. In terms of fire potential on the landscape and fire suppression, the amount of time that is required for a fuel type to become volatile is critical which is why fuels are referred to as either one-hour, ten-hour, 100-hour, or 1,000-hour fuels. This method of classifying fuels describes the amount of time required for two-thirds of the volume of a dead fuel to regulate to atmospheric conditions.

4.1.3.1 County Ecoregions

Malheur County wildlands are predominantly high desert sagebrush and grassland environments. The County's largest forested areas are in the northwestern corner of the county near the unincorporated community of Ironside. There are other smaller patches of forest scattered in the southern portion of the County.

Vegetative and terrain characteristics of the County can be generalized through the mapping of Ecoregions. Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources; they are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components (Thorson et al. 2003). By recognizing the spatial differences in the capacities and potentials of ecosystems, ecoregions stratify the environment by its probable response to disturbance (Bryce et al. 1999). It is conceivable then that Ecoregions delineate areas that would respond differently to wildfire based on differences in terrain and

the distribution of fuel types. The following are descriptions of the Level IV Ecoregions that characterize Malheur County; Ecoregion coverage values are summarized in Table 4-1 and mapped in Figure 4-2:

Table 4-1) Summary of Level IV Ecoregion coverage for Malheur County, OR.

Level 4 Code	Level 4 Name	Level 3 Name	Percent Coverage
11d	Melange	Blue Mountains	42.8%
11h	Continental Zone Highlands	Blue Mountains	<0.1%
11i	Continental Zone Foothills	Blue Mountains	6.7%
12a	Treasure Valley	Snake River Plain	2.9%
12j	Unwooded Alkaline Foothills	Snake River Plain	2.7%
80a	Dissected High Lava Plateau	Northern Basin and Range	22.8%
80d	Pluvial Lake Basins	Northern Basin and Range	0.5%
80f	Owyhee Uplands and Canyons	Northern Basin and Range	12.4%
80g	High Lava Plains	Northern Basin and Range	7.1%
80j	Semiarid Uplands	Northern Basin and Range	1.0%
80l	Salt Shrub Valleys	Northern Basin and Range	1.0%

Melange (11d): The Melange ecoregion has a complex geology, composed of ocean sediments, granitic intrusions, and metamorphosed sediments. Soils are droughty and high in magnesium, creating a poor medium for plant growth; reforestation problems limit logging. Placer mining for gold altered the structure of many stream channels and left extensive tailings piles in riparian areas.

Percent Coverage of Malheur County: 42.8%

Continental Zone Highlands (11h): The mountainous Continental Zone Highlands experience seasonal temperature extremes and low annual precipitation. The predominant forest cover is ponderosa pine with a shrub or bunchgrass understory. Frequent fires once influenced the open character of the forest. This ecoregion lacks a zone of true firs found in other highland areas in the Blue Mountains.

Percent Coverage of Malheur County: <0.1%

Continental Zone Foothills (11i): The Continental Zone Foothills lie in the rainshadow of the Cascade Range and Blue Mountains. Plants experience wide temperature variations, high evapotranspiration rates, and high early-season moisture stress in a continental climate. The distribution of desert shrubs varies with soil depth, texture, and elevation. Mountain mahogany and bitterbrush provide winter cover and forage for mule deer. Rodents, songbirds, and upland game birds also use the fruits of bitterbrush.

Percent Coverage of Malheur County: 6.7%

Treasure Valley (12a): The Treasure Valley ecoregion flanks the Snake and Malheur rivers and is underlain by Quaternary alluvium, loess, lacustrine, and alluvial fan deposits. Soils have an aridic moisture regime and they originally supported sagebrush/grass associations before the valley was converted to agriculture. Canals and diversions in this portion of the Snake River Plain (12) supply water to pastureland and cropland as well as municipalities. Water quality in many stream reaches has been significantly affected by channel alteration, dams, irrigation diversions, irrigation return flow, and agricultural pollution. Crops include wheat, sugar beets, alfalfa, potatoes, and onions. Population density is greater than in neighboring, rangeland-dominated ecoregions. Vegetation outside of agricultural areas is dominated by Wyoming big sagebrush, basin big sagebrush, bluebunch wheatgrass, and cheatgrass. In saline areas, shadscale, greasewood, and saltgrass occur.

Percent Coverage of Malheur County: 2.9%

Unwooded Alkaline Foothills (12j): The Unwooded Alkaline Foothills ecoregion is shrub- and grass-covered. This ecoregion contains rolling foothills, hills, benches, alluvial fans, and scattered badlands that are characteristically underlain by alkaline lacustrine deposits. The terrain is higher and more rugged than the neighboring Treasure Valley (12a). Perennial streams are rare. This ecoregion is valuable as rangeland and wildlife habitat. Land use is generally distinct from the irrigated agriculture of the neighboring Treasure Valley (12a). However, scattered areas near rivers with enough water to leach salts from the soil, support alfalfa or sugar beet farming. Vegetation is dominated by Wyoming big sagebrush and associated grasses. Salt tolerant shrubs, including black greasewood, fourwing saltbush, inland saltgrass, and shadscale, occur on alkaline outcrops.

Percent Coverage of Malheur County: 2.7%

Dissected High Lava Plateau (80a): The nearly level to undulating Dissected High Lava Plateau is underlain by basalt and cut by shear-walled canyons. Potential natural vegetation is mostly sagebrush steppe but scattered juniper woodlands grow on rocky uplands. Streams drain to the Snake River; in contrast, the High Lava Plains (80g) and the Central Basin and Range (13) are internally-drained. Intermittent lakes occur but are much less common than in Ecoregion 80g. This Ecoregion is primarily rangeland and wildlife habitat.

Percent Coverage of Malheur County: 22.8%

Pluvial Lake Basin (80d): The Pluvial Lake Basins contained vast lakes during the Pleistocene epoch, but, today, they do not seasonally collect water as extensively as the High Desert Wetlands (80e). The dry lake beds near the Cascade Mountains have a significant ash layer present. Sagebrush dominates with associated grasses. The land is used for rangeland and sprinkler-irrigated alfalfa farming.

Percent Coverage of Malheur County: 0.5%

The Owyhee Uplands and Canyons (80f): The Owyhee Uplands and Canyons ecoregion is a sagebrush steppe containing deep river canyons, barren lava fields, badlands, and tuffaceous outcrops that are riddled by caves. Though the climate and vegetation of this Ecoregion are similar to the Dissected High Lava Plateau (80a), its lithology is more varied, stream density is higher, and water availability is greater than in Ecoregion 80a. These attributes, combined with its remote location, make this Ecoregion a particularly valuable refuge for wildlife.

Percent Coverage of Malheur County: 12.4%

High Lava Plains (80g): The vast, nearly level to undulating High Lava Plains ecoregion is shrub- and grass-covered and contains scattered volcanic cones and buttes. This Ecoregion is internally-drained in contrast to Ecoregion 80a, and, as a result, it lacks anadromous fish runs. This Ecoregion also differs from the Dissected High Lava Plateau (80a) in having numerous intermittent lakes (80d and 80e). The vegetation is sagebrush steppe; bunchgrasses, including bluebunch wheatgrass, are generally associated with Wyoming big sagebrush except in overgrazed areas where they have been depleted and replaced by cheatgrass.

Percent Coverage of Malheur County: 7.1%

Semiarid Uplands (80j): The Semiarid Uplands ecoregion includes scattered hills, low mountains, and buttes. Elevations vary from 4,800 to 7,500 feet. Moisture levels are high enough to support woodland. This Ecoregion is largely covered by juniper steppe woodland on rocky soils and sagebrush steppe or Idaho fescue on more finely textured soils. The density and extent of juniper varies over time and is dependent on climate, grazing pressure, and fire suppression.

Percent Coverage of Malheur County: 1.0%

Salt Shrub Valleys (80l): The arid Salt Shrub Valleys were once inundated by Pleistocene lakes. Nearly flat basin floors are extensive and wetlands, terraces, dunes, and alluvial fans also occur. Characteristically, the basin floors have strongly saline and very alkaline soils that support black greasewood, inland saltgrass, shadscale, and bud sagebrush. Soils, climate, and vegetation are transitional to the Central Basin and Range (13) and Lahontan Salt Shrub Basin (13j) to the south. Rangeland and irrigated agriculture occur.

Percent Coverage of Malheur County: 1.0%

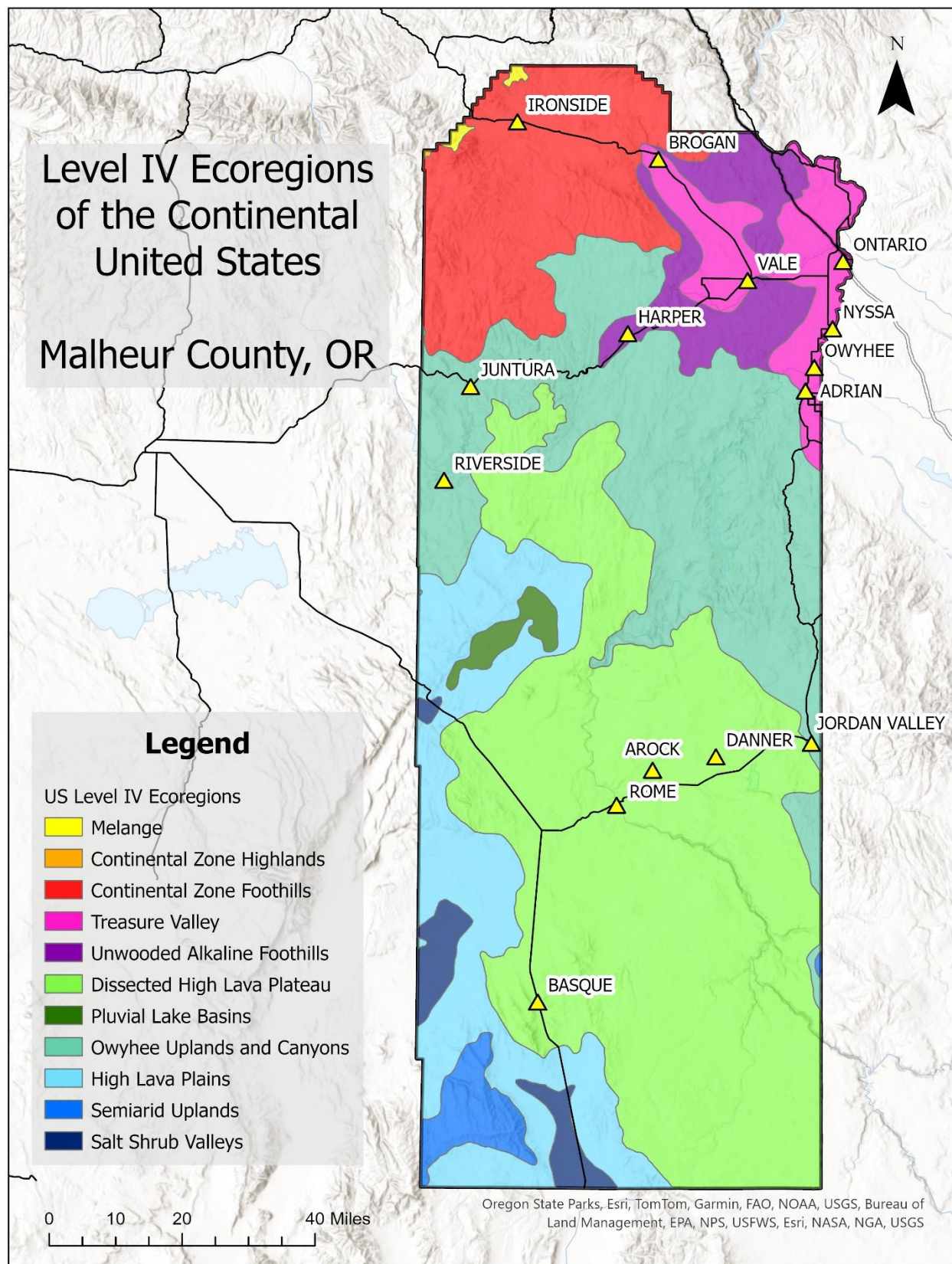


Figure 4-2) Distribution of Level IV Ecoregions for Malheur County, OR.

4.2 RECENT FIRE OCCURRENCE

The focus of this section is fire activity that occurred since the last plan update (2009). Excluding section 4.2.3 *Large Wildfires*, the tables and figures included in this section were developed using wildfire data from the Fire Occurrence Data Record (FODR). The FODR is described in additional detail below.

InFORM Fire Occurrence Data Records (2025)⁵:

This dataset represents the Fire Occurrence Data Record (FODR) produced by the Interagency Fire Occurrence Reporting Modules (InFORM) Application. The FODR is the authoritative fire occurrence data set for the five major federal fire management agencies and some state agencies. The FODR also includes records that are bulk uploaded by state agencies that are not InFORM participants, thus providing a comprehensive fire occurrence data set for the United States.

The InFORM (Interagency Fire Occurrence Reporting Modules) FODR (Fire Occurrence Data Records) are the official record of fire events. Built on top of IRWIN (Integrated Reporting of Wildland Fire Information), the FODR starts with an IRWIN record and then captures the final incident information upon certification of the record by the appropriate local authority.

4.2.1 Fires by Cause

According to National Interagency Fire Center statistics, there were 676 fire starts recorded in Malheur County during the period 2009 to 2025. Most of those fires (62.6%) were determined to have been started by natural causes (i.e., lightning). An additional 32.1% of wildfires were caused by human activity and 5.3% were caused by undetermined sources or were not categorized (Table 4-2 and Figure 4-3).

Table 4-2) Number of wildfires in Malheur County, OR by cause for the period 2009 to 2025. Data is from the National Interagency Fire Center (InFORM Fire Occurrence Data Records 2025).

Year	Human	Natural	Undetermined	No Category	Total
2009	8	18	0	0	26
2010	3	14	0	0	17
2011	11	33	0	0	44
2012	8	27	0	0	35
2013	4	55	0	2	61
2014	8	26	0	0	34
2015	6	24	0	0	30

⁵ InFORM Fire Occurrence Data Records. National Interagency Fire Center. 2025. Available online at: <https://data-nifc.opendata.arcgis.com/datasets/nifc::inform-fire-occurrence-data-records/about>

Year	Human	Natural	Undetermined	No Category	Total
2016	19	15	0	0	34
2017	13	50	0	0	63
2018	16	15	0	0	31
2019	8	25	0	0	33
2020	20	9	6	1	36
2021	16	14	4	1	35
2022	14	15	6	1	36
2023	19	11	3	2	35
2024	24	35	0	7	66
2025	20	37	0	3	60
Total	217	423	19	17	676
Percent	32.1%	62.6%	2.8%	2.5%	100%

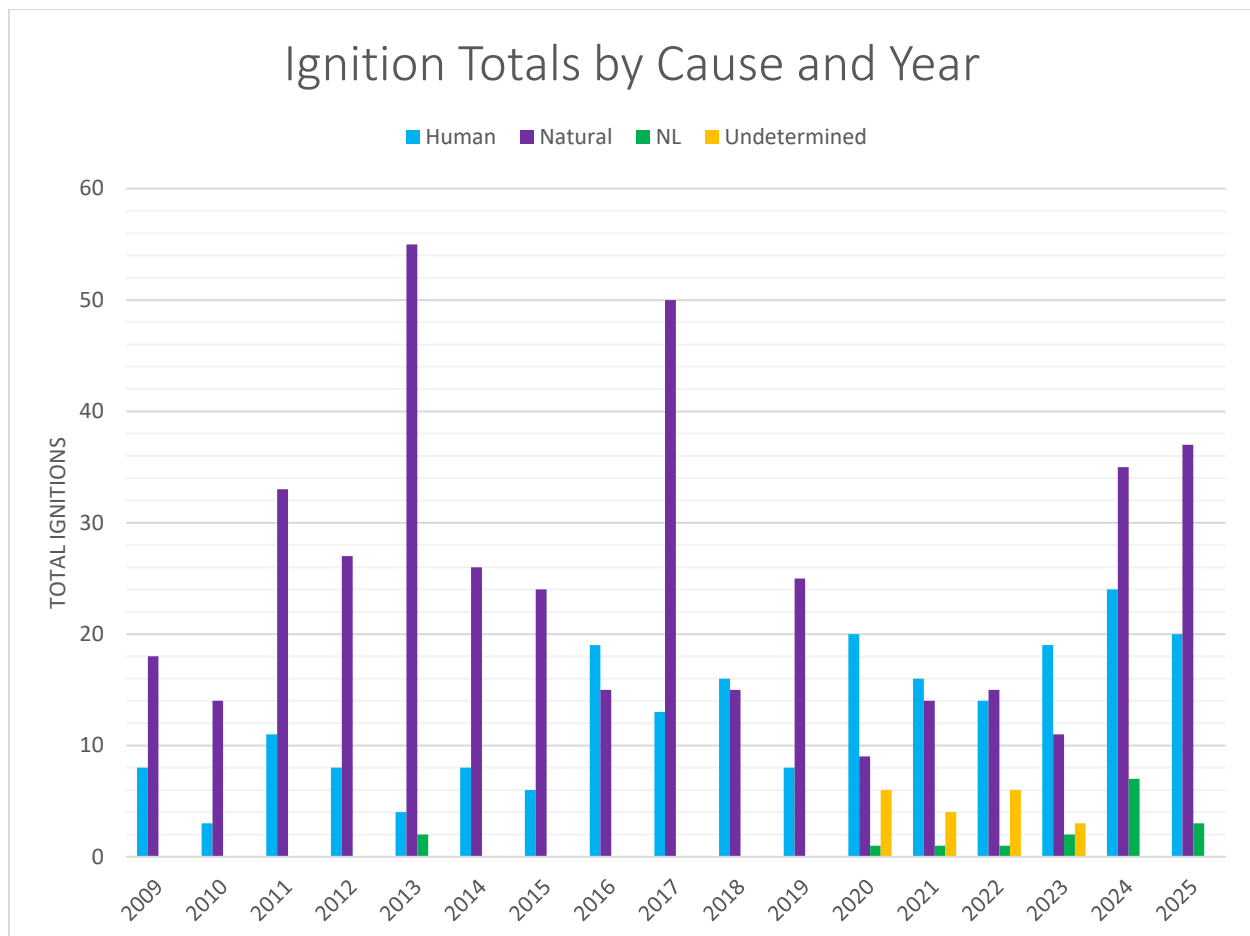


Figure 4-3) Number of wildfires in Malheur County, OR by cause for the period 2009 to 2025. Data is from the National Interagency Fire Center (InFORM Fire Occurrence Data Records 2025).

In the dataset, human-caused fires were further broken down into more specific categories that provide more insight as to how sources of human-caused ignitions were categorized. The data included in this section are from the “General Cause” category of the InFORM Fire Occurrence Data Records. It is important to note that a general cause was not included for each data entry (wildfire). Therefore, this analysis is only offered as a general overview of ignition sources that are associated with human-caused fires in Malheur County. According to available data, which includes 210 total general cause entries, most human-caused wildfire ignitions were associated with equipment and vehicle use (Table 4-3).

Table 4-3) Summary of ignition sources associated with human-caused wildfires in Malheur County, OR for the period 2009 to 2025. General Cause data are from the InFORM Fire Occurrence Data Records (2025). A General Cause entry was not completed for each wildfire on record in the dataset. Therefore, this summary is not representative of all fires on record the analysis period.

General Cause of Human-Caused Wildfires	Incidents	Percent
Arson	20	9.5%
Cigar/cigarette/pipe	4	1.9%
Debris and open burning	13	6.2%
Equipment and vehicle use	88	41.9%
Firearms and explosives use	5	2.4%
Fireworks	6	2.9%
Other causes	26	12.4%
Power generation / transmission	4	1.9%
Railroad operations and maintenance	1	0.5%
Recreation and ceremony	5	2.4%
Undetermined	38	18.1%
Total	210	100.0%

4.2.2 Frequency of Ignitions

According to the InFORM wildfire data, between the years 2009 and 2025 there were a total of 676 wildfire ignitions in Malheur County. On average, there were approximately 40 wildfire ignitions annually for that period, with the fewest number of ignitions occurring in 2010 (17) and the most in 2024 (66). Below is a chart displaying the trend of wildfire ignitions which indicates that only a slight increase in annual ignitions occurred for the period (Figure 4-4).

Wildfires ignitions for the same period are mapped in Figure 4-5. It appears that a greater number of ignitions have occurred in areas in the northern portion of the county where human activity is more concentrated. This could include areas such as transportation corridors, population centers, and recreational areas.

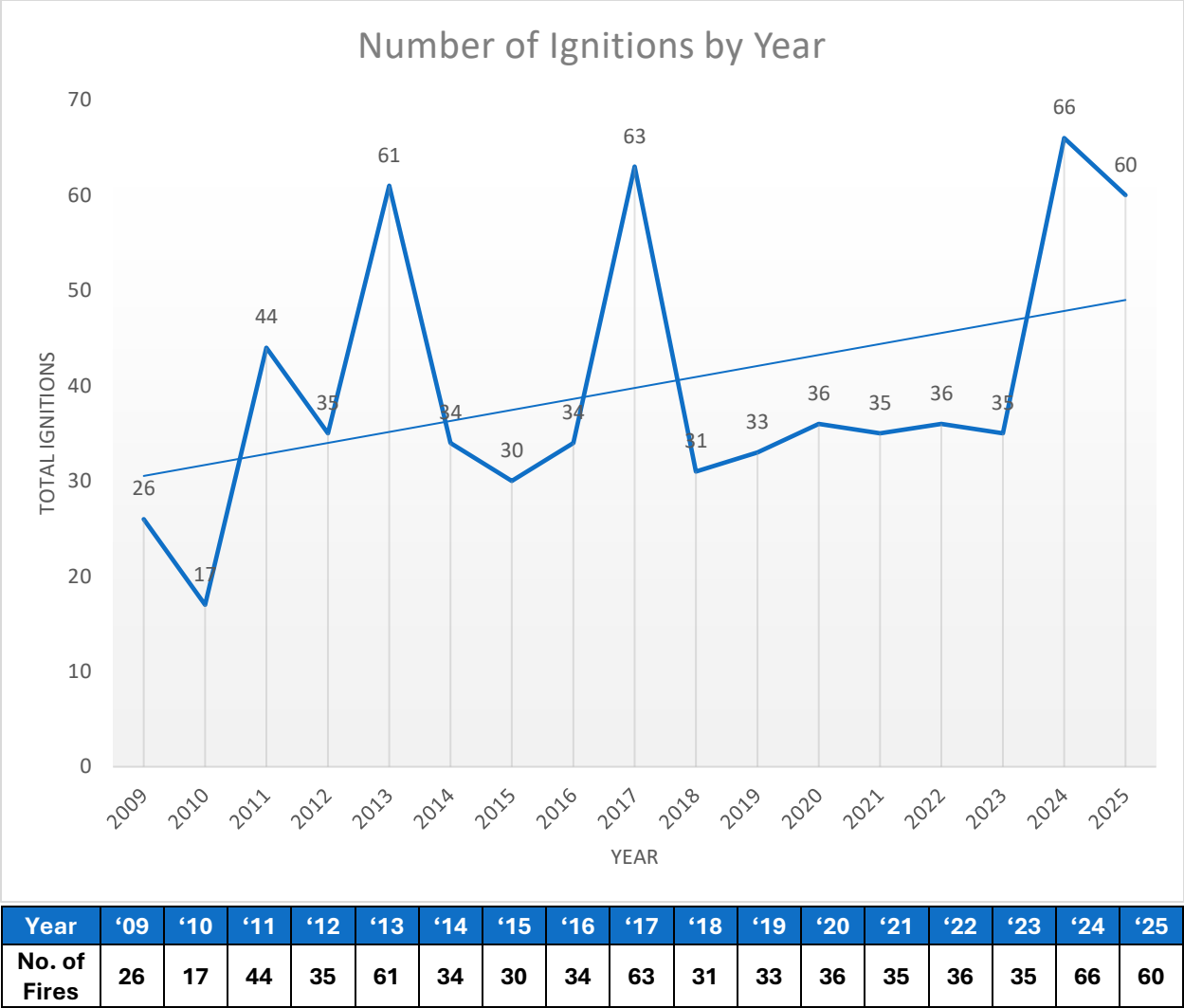


Figure 4-4) Ignitions from 2009-2025, data provided by NIFC (InFORM Fire Occurrence Data Records 2025).

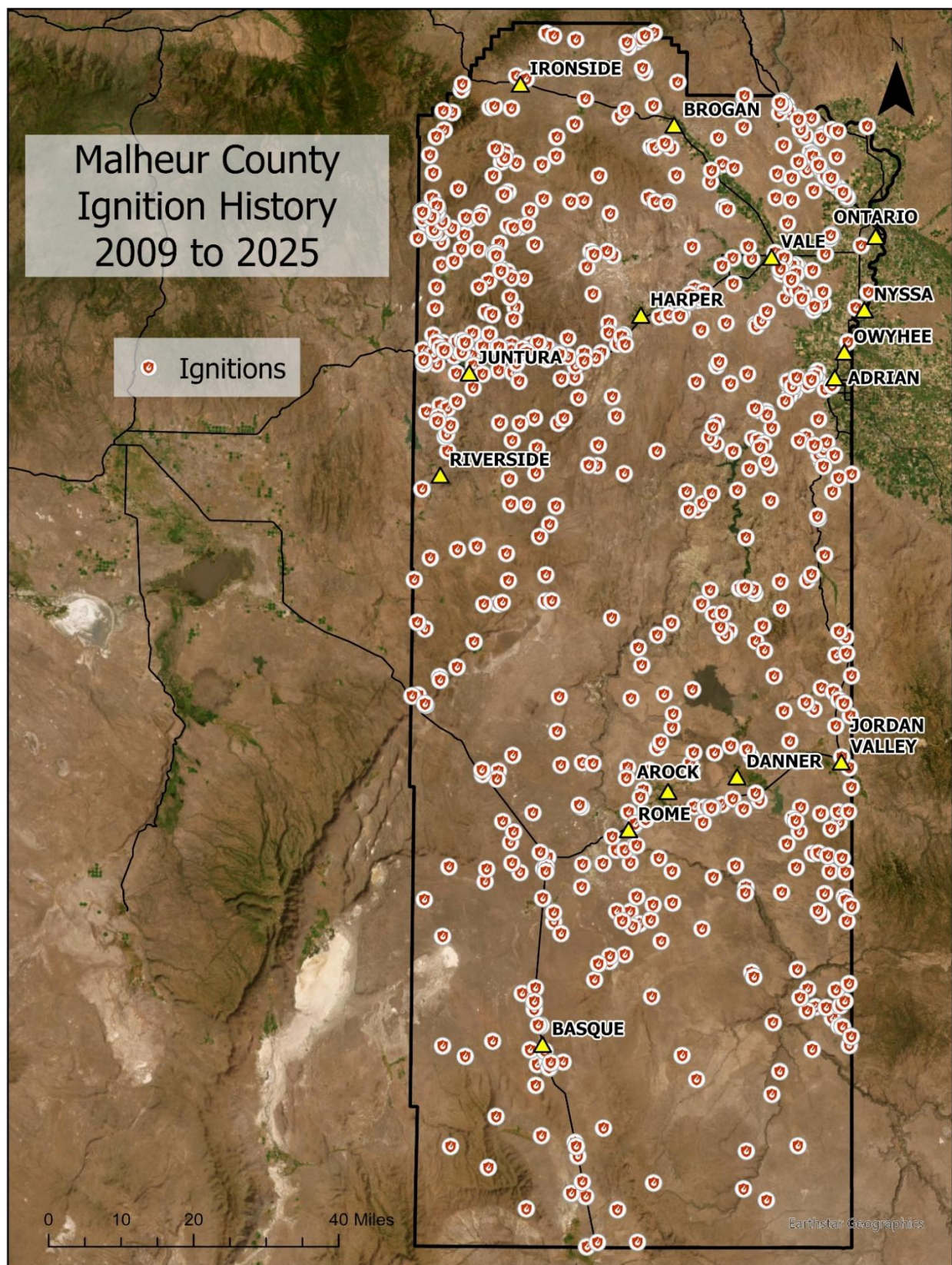


Figure 4-5) Wildfires in Malheur County for the period 2009 to 2025. Data is from the National Interagency Fire Center (InFORM Fire Occurrence Data Records 2025).

4.2.3 Large Wildfires

Large fires occurring across Malheur County have, at times, exceeded the capability of structural and wildland resources, not only calling for the declaration of the Conflagration Act, but also requiring National Incident Management Teams to manage fires at the project fire level. Between 2011 and 2021 a total of 82 large wildfires, those at least 300 acres in size, burned within or in proximity to Malheur County. Of those wildfires, 59 fires (72%) were 10,000 acres or less and 6 fires (7%) were greater than 100,000 acres (Table 4-4). The greatest number of large wildfires occurred in 2012 when 14 fires, those at least 300 acres in size, burned more than 1.4 million acres within or immediately outside of the county (Table 4-5). Large wildfire perimeters are mapped and displayed by year of occurrence in Figure 4-6.

Table 4-4) Number of large wildfires, those that burned at least 300 acres, by size for the period 2011 to 2021. Included are wildfires that burned within and immediately adjacent to Malheur County, OR.

Acres	Number of Fires	% of Fires
300 to 1,000	28	34%
1,001 to 10,000	31	38%
10,001 to 50,000	16	20%
50,001 to 100,000	1	1%
100,001 to 200,000	1	1%
200,001 to 300,000	2	2%
300,001 to 400,000	0	0%
400,001 to 500,000	3	4%
Total	82	100%

Table 4-5) Number of large wildfires, those that burned at least 300 acres, by year and total acres burned for the period 2011 to 2021. Included are wildfires that burned within and immediately adjacent to Malheur County, OR.

Year	Number of Fires	Acres Burned
2011	7	13,196
2012	14	1,413,660
2013	10	79,843
2014	7	243,844
2015	7	595,542
2016	4	61,772
2017	11	35,505
2018	9	14,115
2019	3	3,292
2020	7	63,955
2021	3	1,704
Total	82	2,526,427

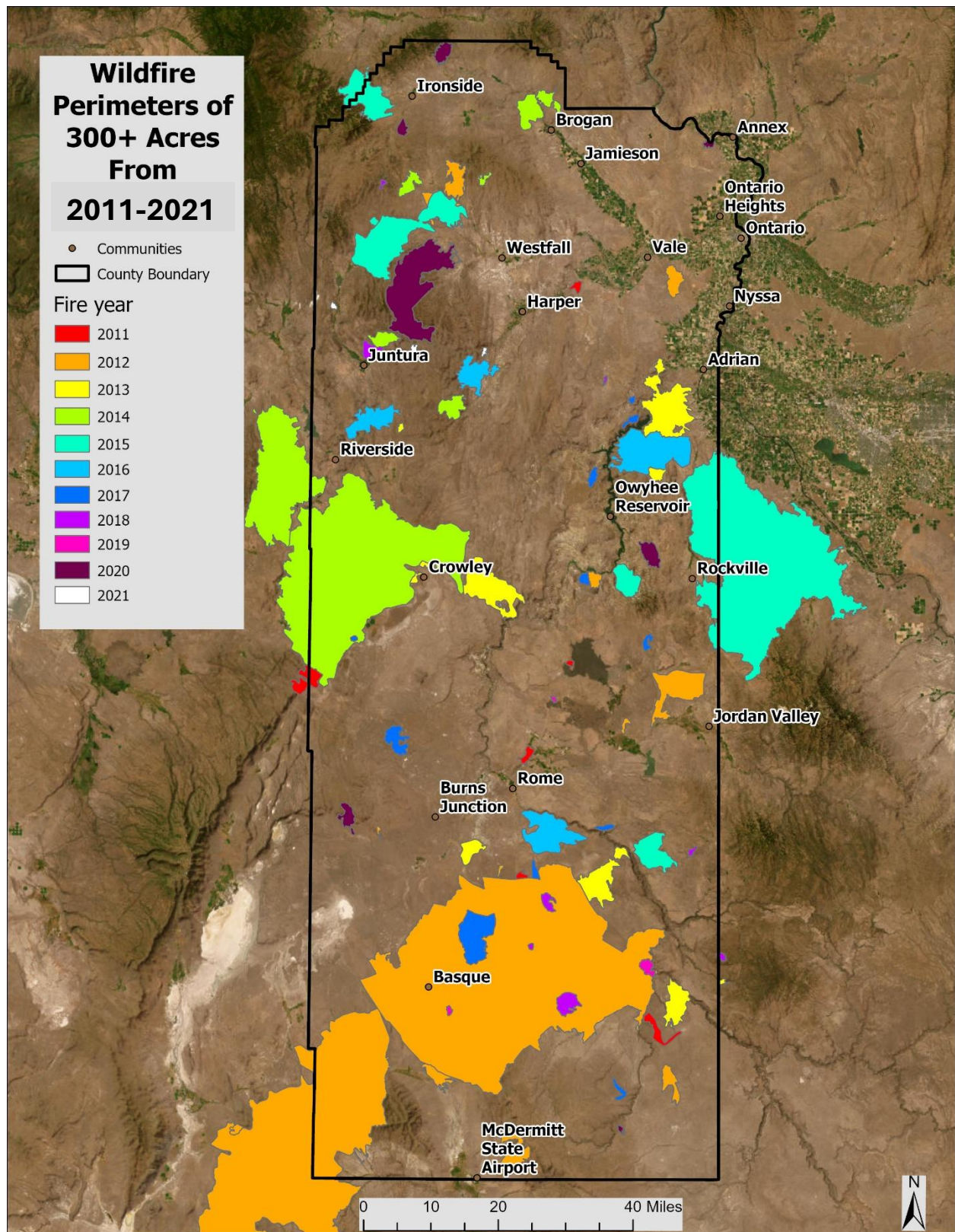


Figure 4-6) Map of large wildfires in Malheur County that were at least 300 acres in size (2011-2021).

4.3 HISTORIC FIRE REGIME

Wildfire is a type of natural disturbance that plays an important role in shaping the development of vegetative communities. This includes the distribution, health, and composition of vegetative communities from the stand level to the landscape level. Prior to the settlement of Euro-Americans, wildfires were primarily started by lightning strikes, or they were the result of cultural burning which was a means of land management practiced by Native Americans. These fires burned naturally (i.e., without significant human intervention) and, over time, began to follow patterns related to timing and severity. In general, this pattern is referred to as a **Fire Regime** which describes the typical range of wildfire characteristics associated with different vegetative communities and environmental conditions. Two major components of a fire regime are **Fire Return Interval** and **Fire Severity**. The fire return interval describes the average amount of time between fires in a specific area while severity describes the extent of vegetation loss or destruction because of wildfire (with “replacement severity” referring to the complete loss of the vegetative overstory).

4.3.1 Management Implications

Historic fire regimes reveal much about how fire influences landscapes and how ecosystems have adapted to fire over time. This information plays an important role in informing land management decisions by:

- **Guiding Restoration Efforts:** By understanding the natural fire patterns of an area, land managers can design restoration projects that reintroduce fire in a controlled manner, promoting the recovery of fire-adapted ecosystems
- **Assessing Ecological Conditions:** Historic fire regime data allows for comparisons between past and current conditions, helping to identify areas where fire-dependent ecosystems have been altered due to fire suppression or other factors.
- **Prioritizing Management Actions:** Knowledge of historic fire regimes aids in identifying areas that would benefit from fire management practices, such as prescribed burns or thinning, to reduce fuel loads and mitigate the risk of catastrophic wildfires.
- **Informing Policy and Decision-Making:** Understanding the role of fire in ecosystems helps policymakers and land managers make informed decisions about fire management strategies, balancing ecological health with human safety and property protection.

Incorporating information about historic fire regimes into land management practices ensures that fire is used as a tool to maintain or restore ecological balance, reduce the risk of severe wildfires, and support biodiversity conservation.

4.3.2 Fire Regime Groups of Malheur County

Malheur County falls within the Northern Basin and Range ecoregion which is the driest ecoregion in Oregon. This ecoregion is typically dominated by sagebrush communities which are often composed of widely spaced sagebrush with an understory of forbs and perennial bunchgrasses⁶. When sagebrush communities are healthy and free of invasive or exotic species they tend to burn infrequently and at a higher severity (i.e., stand replacing) (Innes and Zouhar 2018). According to historic fire regime data most areas within Malheur County (more than 90% of the total area) would have burned every 35 to 200 years and, depending on the condition of the vegetation, fire intensity would have ranged from low to high.

When looking at specific fire regime groups (Table 4-6; Figure 4-7) most of Malheur County (approx. 68.5% of the total area) is classified as FRG III which means that, historically, those areas were likely to have burned every 35 to 200 years at mixed levels of severity (i.e., low intensity to high intensity). Areas classified as FRG IV (21.6% of the total area) are expected to have burned at the same interval but at a replacement level of severity. Areas of the county classified as FRG II (< 0.1% of the total area) are expected to have burned more frequently (every 35 years or less) and at a replacement level of severity. Areas classified as FRG II include sites that are likely to have been more productive (e.g., sites that were cooler and/or received more precipitation) which resulted in higher rates of fuel accumulation.

Table 4-6) Historic Fire Regime Groups for Malheur County.

Fire Regime Groups	Description	Percentage
Fire Regime Group I	<= 35 Year Fire Return Interval, Low and Mixed Severity	1.8%
Fire Regime Group II	<= 35 Year Fire Return Interval, Replacement Severity	< 0.1%
Fire Regime Group III	35-200 Year Fire Return Interval and Mixed Severity	68.5%
Fire Regime Group IV	35-200 Year Return Interval, Replacement Severity	21.6%
Fire Regime Group V	>200 Year Fire Return Interval, Any Severity	6.9%
Water	Water	0.4%
Barren	Barren	0.7%
Sparsely Vegetated	Sparsely vegetated	0.1%

⁶ Oregon Conservation Strategy. Northern Basin and Range.
<https://oregonconservationstrategy.org/ecoregion/northern-basin-and-range/>

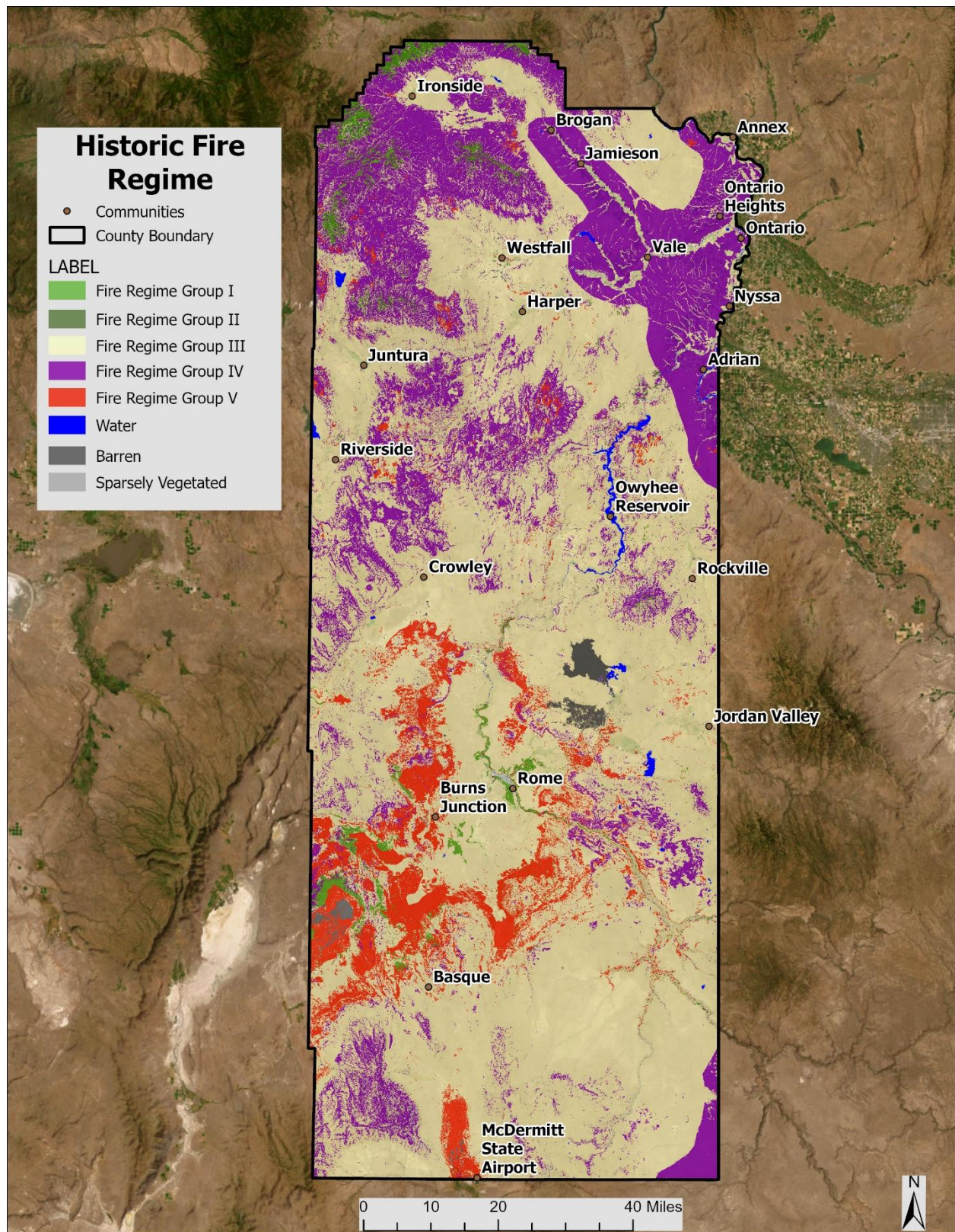


Figure 4-7) Map of Historic Fire Regime Groups for Malheur County.

4.4 VEGETATION CONDITION CLASS

Vegetation Condition Class describes how departed, or different, modern vegetative communities are from historic vegetative communities. The term “Departure” can describe changes in species composition, the size and arrangement of vegetation, the distribution of vegetative communities across the landscape, as well as other attributes that describe how the condition of vegetation on a particular site has changed over time. Assessing these changes is important as they can have a major effect on the frequency and severity of wildland fires. To understand these differences modern vegetative communities are compared to those associated with historic fire regimes. As modern vegetative communities become increasingly different from historic communities they are described as having a higher level of departure. Higher levels of departure could indicate a decrease in the adaptiveness of vegetation to wildfire.

Vegetation condition class consists of three different classes. The three classes are based on low (VCC 1), moderate (VCC 2), and high (VCC 3) departure from the central tendency of the natural (historical) regime. The central tendency is a composite estimate of vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated natural disturbances. Low departure is within the natural (historical) range of variability, while moderate and high departures are outside.

4.4.1 Management Implications

VCC helps land managers identify areas where modern vegetative communities no longer resemble those of the past and how that is likely to affect wildfire frequency and severity. This information can aid land managers in making decisions related to:

- **Identifying Ecological Departures:** VCC helps determine areas where vegetation has significantly diverged from its historical state, often due to disturbances like fire suppression, invasive species, or land-use changes. Recognizing these departures is essential for prioritizing restoration efforts.
- **Guiding Restoration and Management Strategies:** By understanding the current condition of vegetation relative to its historical baseline, land managers can develop targeted interventions to restore ecological balance. This may involve reintroducing natural disturbances, such as controlled burns, or removing invasive species.
- **Assessing Fire Risk and Behavior:** VCC provides insights into fuel loads and vegetation structure, which are critical for evaluating fire behavior and associated risks. This information is vital for planning prescribed burns and other fire management practices to reduce the likelihood of catastrophic wildfires.
- **Informing Policy and Resource Allocation:** Data on VCC supports policymakers in making informed decisions regarding land use, conservation priorities, and resource

distribution. It ensures that management actions are based on a clear understanding of ecological conditions and their historical context.

Incorporating VCC information into land management practices can help make interventions ecologically sound, more effective at addressing current challenges, and ensure that efforts promote the restoration of natural vegetation dynamics.

4.4.2 Vegetation Condition Classes of Malheur County

An analysis of Vegetation Condition Classes in Malheur County shows that vegetation across 72% of the county is moderately departed (VCC II) while 21% is highly departed (VCC III) (Table 4-7); Figure 4-8). Only 1% of the county is classified as low departure (VCC I) which indicates that vegetation in those areas is within the natural range of variability.

Natural range of variability describes the variation in ecosystem and landscape characteristics prior to European settlement in North America (Keane and Loehman, 2019). It serves as a benchmark that can provide an ecological reference against which contemporary conditions can be evaluated to determine status, trend, and magnitude of departure from historic conditions (Keane and Loehman, 2019). These departures can then be used to (1) prioritize areas for possible treatment, (2) design feasible treatments for restoration, (3) develop monitoring plans to evaluate treatment results, and (4) identify drivers of change associated with ecosystem transitions (Aplet et al. 2000; Andersen et al. 2009; Alagona et al. 2012; Dickinson 2014 as cited in Keane and Loehman, 2019).

As Malheur County is largely characterized by sagebrush communities, it is likely that departure from historic conditions is attributed to the absence of fire on the landscape and an increasing component of invasive species. The absence of fire can create opportunities for more woody species to grow, which would cause significant changes in the composition, structure, and distribution of vegetative communities. Frequent, low intensity wildfires would promote the persistence of grasses as they are much more likely to survive such fires when compared to woody species. Invasive species, such as cheatgrass, can also dramatically alter the dynamics of vegetative communities. A heavy component of cheat grass can increase fuel density and continuity which promotes large, high intensity fires.

Table 4-7) Vegetation Condition Class in Malheur County.

Class	Description	Percentage
Vegetation Condition Class I	Low Vegetation Departure 0-33%	1%
Vegetation Condition Class II	Moderate Vegetation Departure 34-66%	72%
Vegetation Condition Class III	High Vegetation Departure 67-100%	21%
Water	Water	1%
Barren	Barren	2%
Agriculture	Agriculture	2%

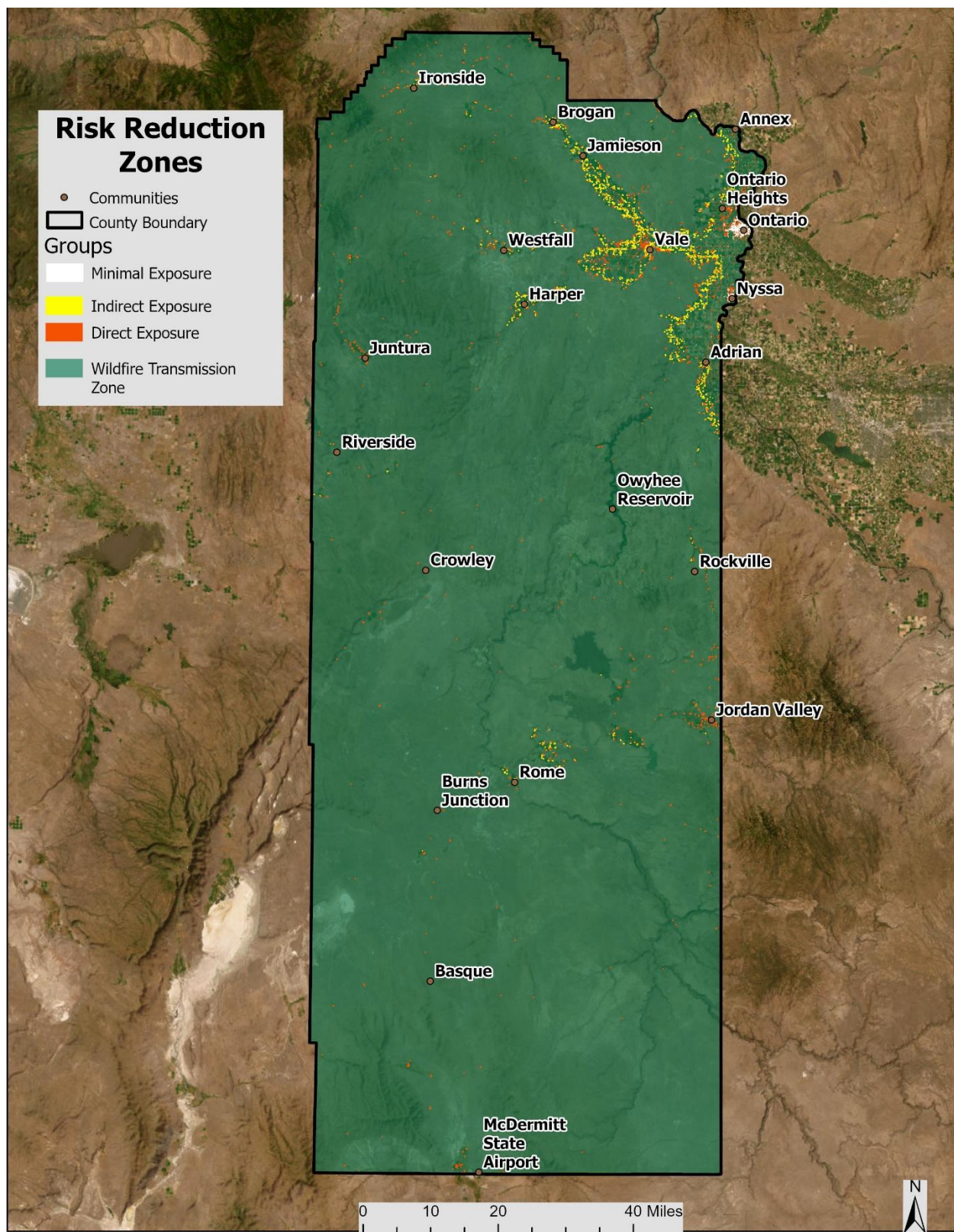


Figure 4-8) Risk Reduction Zones in Malheur County.

5 WILDLAND FIRE RISK ASSESSMENT

5.1 WILDFIRE RISK MODELS

Several USFS-sponsored risk modeling tools were used to identify hazard areas in and estimate and describe wildfire risk to communities in Malheur County⁷. Included in this analysis are the outputs for the Risk to Homes (Risk to Potential Structures), Wildfire Likelihood (Burn Probability), Risk Reduction Zones, and Vulnerable Populations models. Language highlighted in blue are direct excerpts from the Wildfire Risk to Communities website.

5.1.1 Risk to Homes

The Wildfire Risk to Homes model assesses the relative risk for wildfire damage to homes on a site whether homes do or do not actually exist on that site. In addition to providing a risk assessment at the site-level, the model also provides a county-level ranking for risk relative to other counties within the State of Oregon as well as across the United States.

Risk to homes allows us to consider wildfire risk in places with homes in addition to places where new construction is proposed. Risk to homes integrates modeled data about wildfire likelihood and intensity with a generalized concept of susceptibility for homes. Communities in all but the lowest risk class need to be prepared for wildfire.

Homes in Malheur County have, on average, greater risk for wildfire damage than 94% of counties in the US and greater risk than 63% of counties in Oregon. The model output (Figure 5-1) identifies areas in Malheur County where risk to homes is elevated. These areas may benefit from additional mitigation efforts and heightened levels of community wildfire preparedness.

Wildfire Risk to Communities assumes all homes that encounter wildfire will be damaged, and the degree of damage is directly related to wildfire intensity. Wildfire Risk to Communities does not account for homes that may have been mitigated.

5.1.2 Wildfire Likelihood (Burn Probability)

The Wildfire Likelihood model estimates the probability of wildfire occurrence in any given year. It does not report the severity or intensity of a fire, only the likelihood that one occurs.

⁷ Wildfire Risk to Communities. USDA, USFS. Accessed online at <https://wildfirerisk.org/explore/overview/41/41045/>

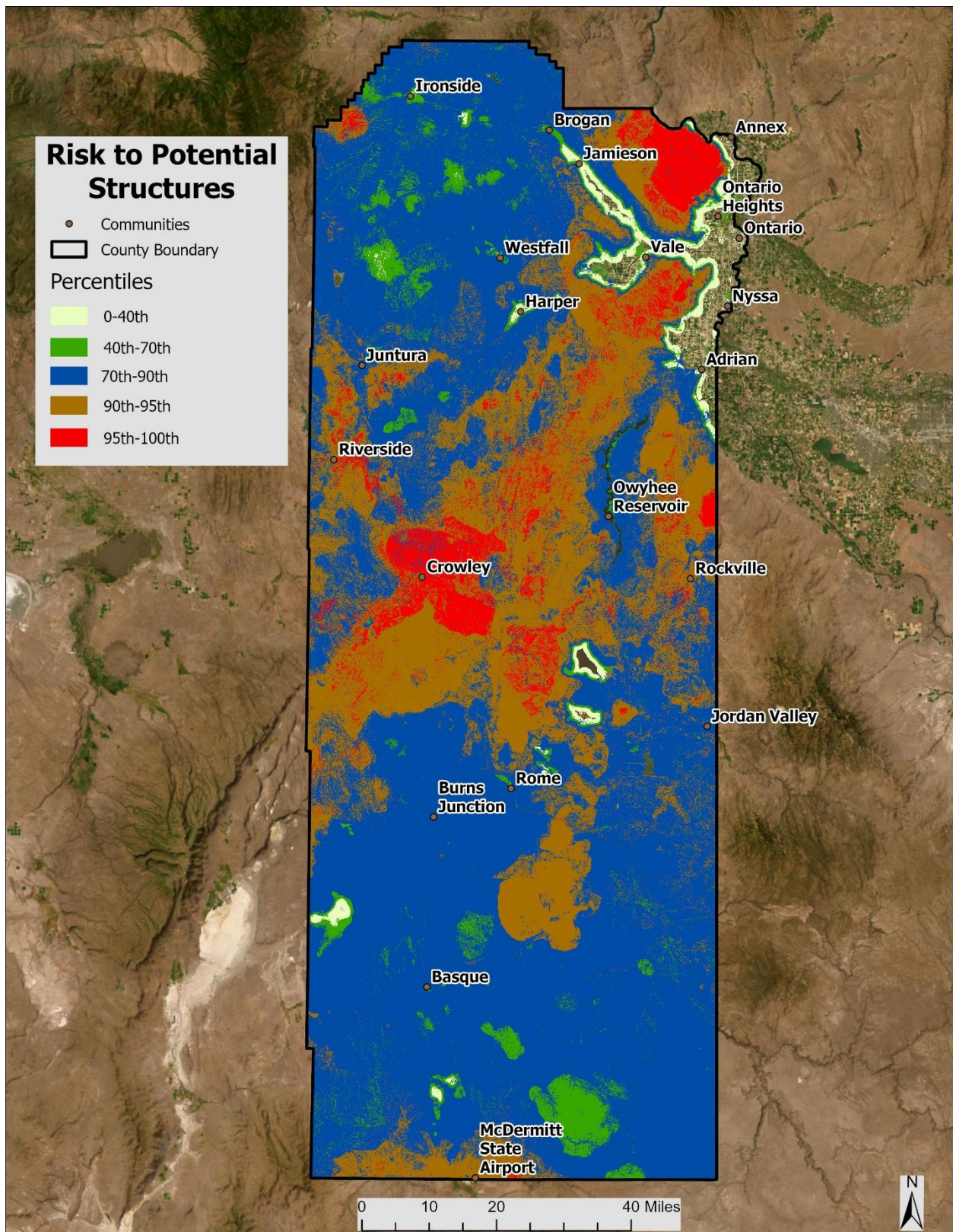


Figure 5-1) Risk to Potential Structures in Malheur County.

Wildfire Likelihood is the probability of a fire occurring based on fire behavior modeling across thousands of simulations of possible fire seasons. In each simulation, factors contributing to the probability of a fire occurring – including weather, topography, and ignitions are varied based on patterns derived from observations in recent decades.

Wildfire likelihood is not predictive and does not reflect any currently forecasted weather or fire danger conditions.

Malheur County has, on average, a greater likelihood of wildfire occurrence in any given year than 95% of counties in the US and a greater likelihood than 69% of counties in Oregon. The probability of wildfire occurrence across Malheur County is displayed in Figure 5-2. According to the values in Table 5-1, most of Malheur County has a high probability of wildfire occurrence (0.465% to 2.17% chance of occurrence).

Table 5-1) Wildfire Likelihood (Burn Probability) Values.

Burn Probability	Parameters
Very Low	0-.21%
Low	.021%-.10%
Medium	.10%-.465%
High	.465%-2.17%
Very High	2.17%-10%

5.1.3 Risk Reduction Zones

The Risk Reduction Zone model identifies areas where mitigation practices will be the most effective at protecting structures from wildfire. The model places these areas into different zones based on the spatial relationship between structures and vegetation. Effective wildfire risk-reduction activities will vary depending on the zone.

Risk reduction zones are calculated by comparing wildfire likelihood, flammable vegetation, and populated areas. The number of buildings in each zone is found by using building footprints within the political boundaries of the location.

In Malheur County most buildings (46%), given their spatial relationship to wildland fuels, fall within the Minimal Exposure Zone. This would include buildings in the interior of developed areas that have spatial separation from continuous wildland fuels. The Direct Exposure Zone contains the second highest number of buildings (39%). These buildings are in proximity to or adjacent to wildland fuels which puts them at risk of being in direct contact with wildfire. The Wildfire Transmission Zone does not contain buildings as these are areas with dense or continuous wildland fuels that may facilitate the spread of fire to areas with buildings, such as Direct Exposure Zones. Risk Reduction Zone definitions and building counts for each zone, excluding the Wildfire Transmission Zone, are included in Table 5-2. Malheur County Risk Reduction Zones are mapped in Figure 5-3.

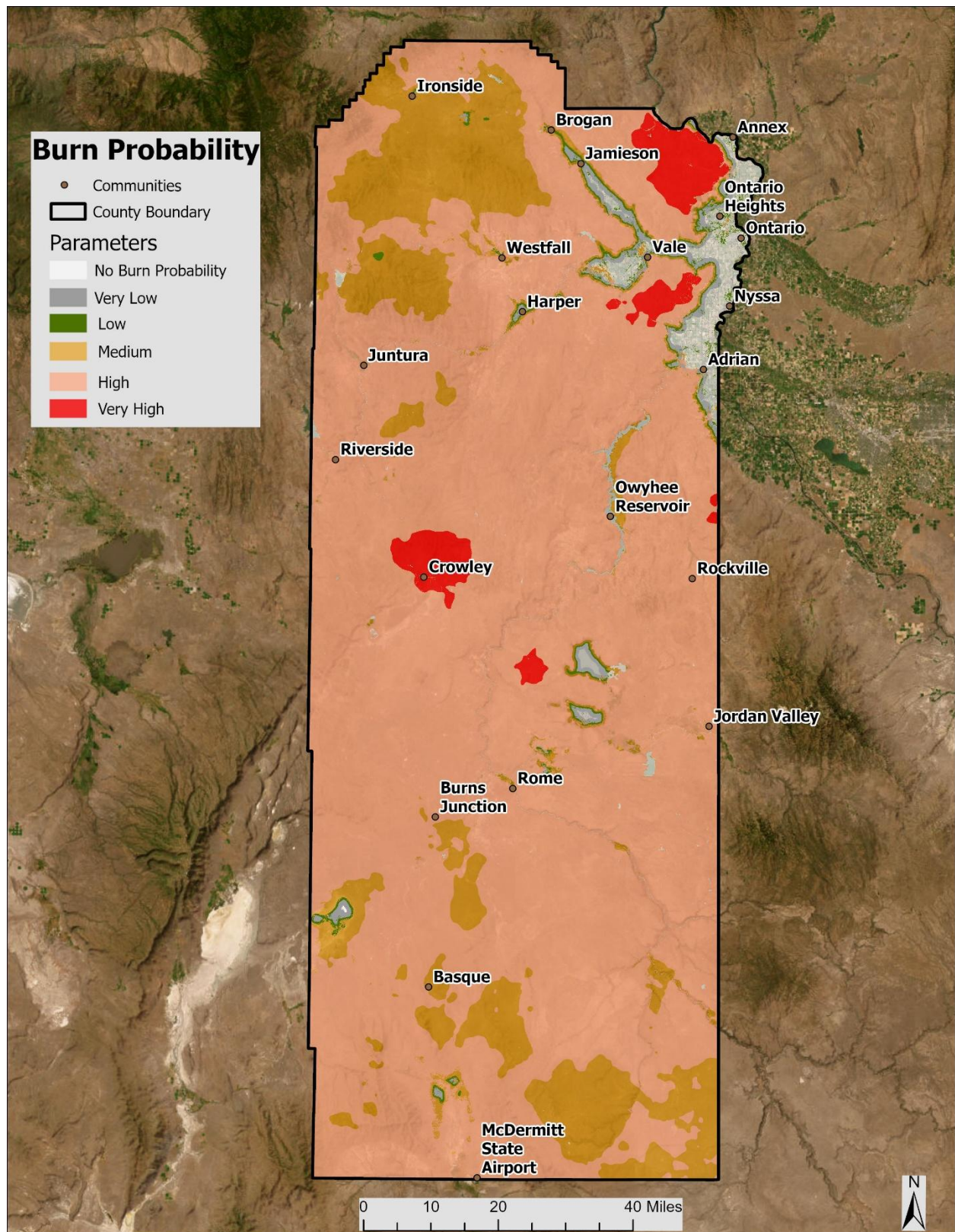


Figure 5-2) Wildfire Likelihood (Burn Probability) in Malheur County.

Table 5-2) Risk Reduction Zone definitions and building counts by zone for Malheur County.

Risk Reduction Zones	Zone Definition	Building Count
Minimal Exposure	Unlikely to be affected by wildfire	10,269 Buildings; 46% of total
Indirect Exposure	Embers can cause ignitions from home to home but there isn't a direct risk of wildfire	3,213 Buildings; 15% of total
Direct Exposure	Homes in this category are in direct contact with wildfire through vegetation, embers, or nearby structures	8,661 Buildings; 39% of total
Wildfire Transmission	Area near homes where flammable vegetation may expose homes to wildfire	N/A

In each of these zones there are different steps that communities and homeowners can take to mitigate wildfire hazards and reduce the risk of structure exposure to wildfire. Such actions include, but are not limited to, creating buffers around structures, creating fuel breaks between wildland fuels and structures, using fire resistant building materials, creating safe access for emergency responders, and, in general, limiting potential sources of ignition around structures. Such actions are more thoroughly described in section 7.2 *Mitigation Strategies for Homeowners*.

5.1.4 Vulnerable Populations

Vulnerable populations are those experiencing certain social and economic conditions that serve as obstacles to wildfire preparedness, response, and recovery. Some of these factors include limited financial resources, access to transportation, language barriers, mobility, medical needs, and disparities related to other variables such as race.

For example, people over age 65 and people who are disabled are more susceptible to air pollution and particulates associated with wildfire smoke. Language barriers can make it difficult to follow directions during an evacuation or to access support after a disaster. Race and ethnicity are strongly correlated with disparities in health and access to aid and resources. Wildfires disproportionately impact people with low incomes because of factors such as inadequate housing and a diminished ability to evacuate or relocate.

According to the Vulnerable Populations model, vulnerable populations in Malheur County are at high risk of encountering difficulties in preparing for, responding to, and recovering from wildfire. A summary of vulnerable populations is included in Table 5-3. Depending on the type of disparities associated with each population, mitigation efforts can be made to, for example, increase the level of preparedness of vulnerable populations or to increase the likelihood that members of vulnerable populations will be able to shelter in-place or effectively evacuate during a wildfire.

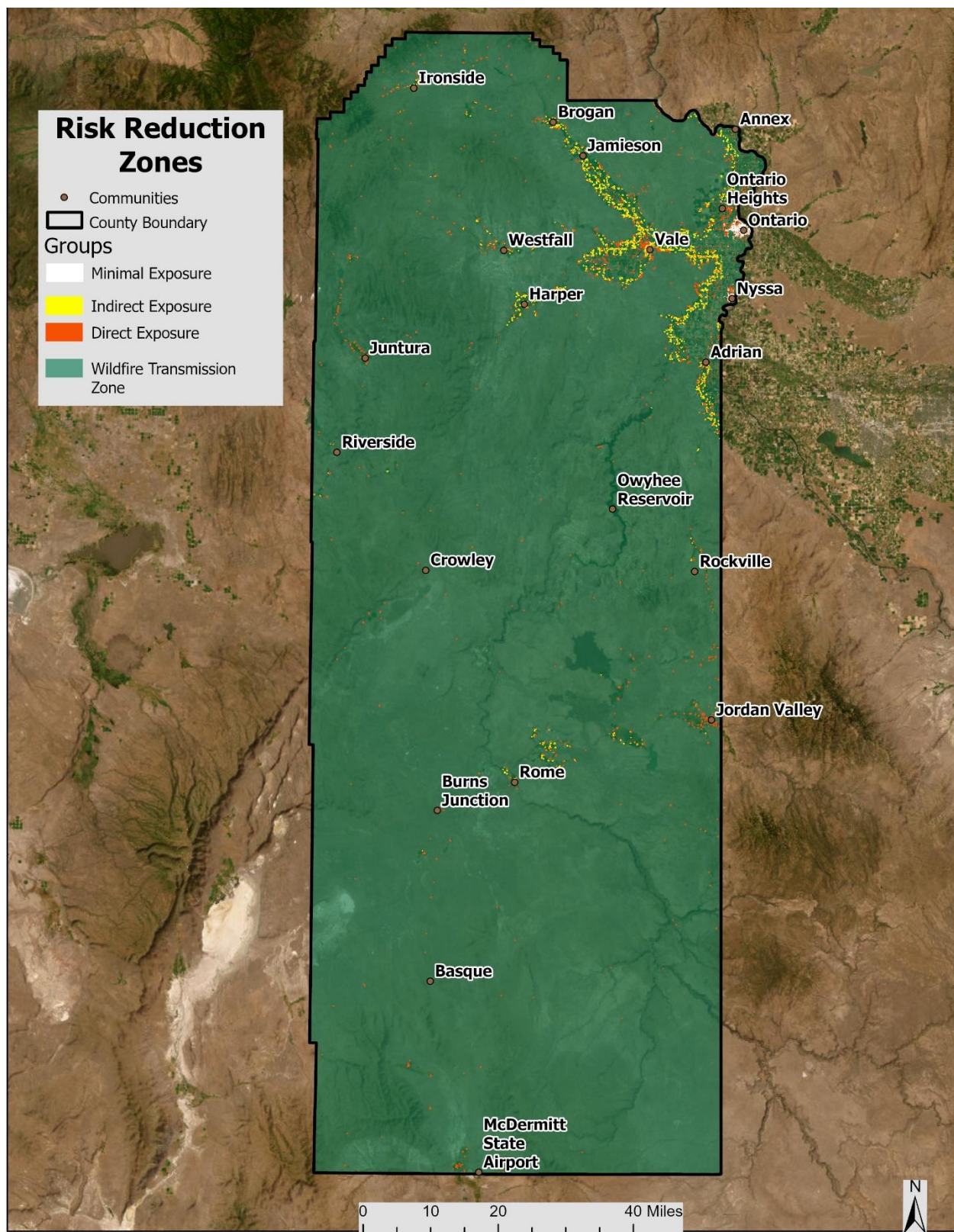


Figure 5-3) Risk Reduction Zones in Malheur County.

Note about the Vulnerable Populations Mapping Tool: *Data about potentially vulnerable populations are shown at the neighborhood level so that leaders can direct resources within a community. Census tracts are highlighted that have values equal to or greater than the community median. Data are from the U.S. Census Bureau's American Community Survey.*

Table 5-3) Vulnerable populations in Malheur County.

Indicator	Number	Percent
Families in Poverty	940	14.9%
People with Disabilities	4,575	16.2%
People over 65	5,257	16.7%
People under 5	2,026	6.4%
People of Color	12,704	40.3%
Difficulty with English	1,576	5.3%
Households with no car	575	5.8%
Mobile Homes	1,674	16.8%

5.2 WILDLAND URBAN INTERFACE (WUI)

In recent years, the West has experienced longer, drier, and hotter summers. Consequently, this trend has altered overall fire behavior and regimes. Fire seasons are getting longer across the West, and, in recent years, the frequency of large, catastrophic wildfires has increased. With these changing fire regimes, fuel loads that are outside of historic variability are a persistent problem that has received national, regional, statewide attention. Impacts from wildfire have become increasingly severe as more people have moved into rural/remote areas which has resulted in an increase in the number of homes that are threatened by wildfire. Additionally, many people relocating to rural Oregon from urban areas expect to have the same level of fire protection (e.g., structural protection) that they had in the urban area they moved from. Rural fire departments combined with local mutual aid agreements and, finally the Conflagration Act, attempt to fulfill these expectations, but many homes are still located in areas with little or no structural or wildland fire protection (i.e., unprotected land; under-protected land). Fires that occur on unprotected lands become the responsibility of Malheur County. Coordination is handled through the Emergency Management office and the Oregon State Fire Marshal's County Fire Chief to determine appropriate response.

Key to protecting people and structures from wildfire is the treatment of hazards in these areas which are referred to, collectively, as the Wildland-Urban Interface (WUI). To be consistent with past planning efforts, the WUI will continue to be defined as the area or zone where structures and other human development meet or intermingle with wildland or

vegetative fuels. The WUI encompasses not only the interface (areas immediately adjacent to urban development), but also the surrounding vegetation and topography.

Reducing hazards in the WUI requires the efforts of federal, state, and local agencies as well as private home and landowners. Community Assistance grants like the Community Wildfire Defense Grant, Western State Fire Chiefs, Coalitions and Collaboratives and other grant opportunities are available to aid in achieving both education and mitigation goals. These funding opportunities are only made available to counties with a current CWPP.

5.2.1 Malheur County WUI

5.2.1.1 Methodology

This process utilized the Oregon Statewide WUI layer made available in 2022 as the starting point for the Malheur County WUI. The statewide WUI was produced by Oregon State University to support the implementation of Senate Bill 762. The methodology, as defined in a technical guide⁸, involved two general steps.

1. Determine areas that meet minimum building density requirements to be classified as WUI.
2. Further classify those areas as intermix, interface, occluded, or non-WUI areas, based on building proximity to wildland fuels.

For the Malheur County CWPP update, this initial mapping effort served as a foundation for the countywide WUI polygon. All intermix, interface, and occluded polygons in the county were selected and a three-mile buffer was applied. Important transportation routes were also included, with a half-mile buffer, including I-84, US 95, US 26, US 20, SR 78, and the Owyhee Lake Road. Other areas of high value were included in the WUI, as designated by the planning team. These areas include the majority of the Owyhee Reservoir and the Blue Mountain Communications Array in the southern part of the county. Using visual review and analysis, the planning group agreed that all current communities at risk, consistent with the 2020 Oregon Communities At Risk Report⁹, were included in this polygon.

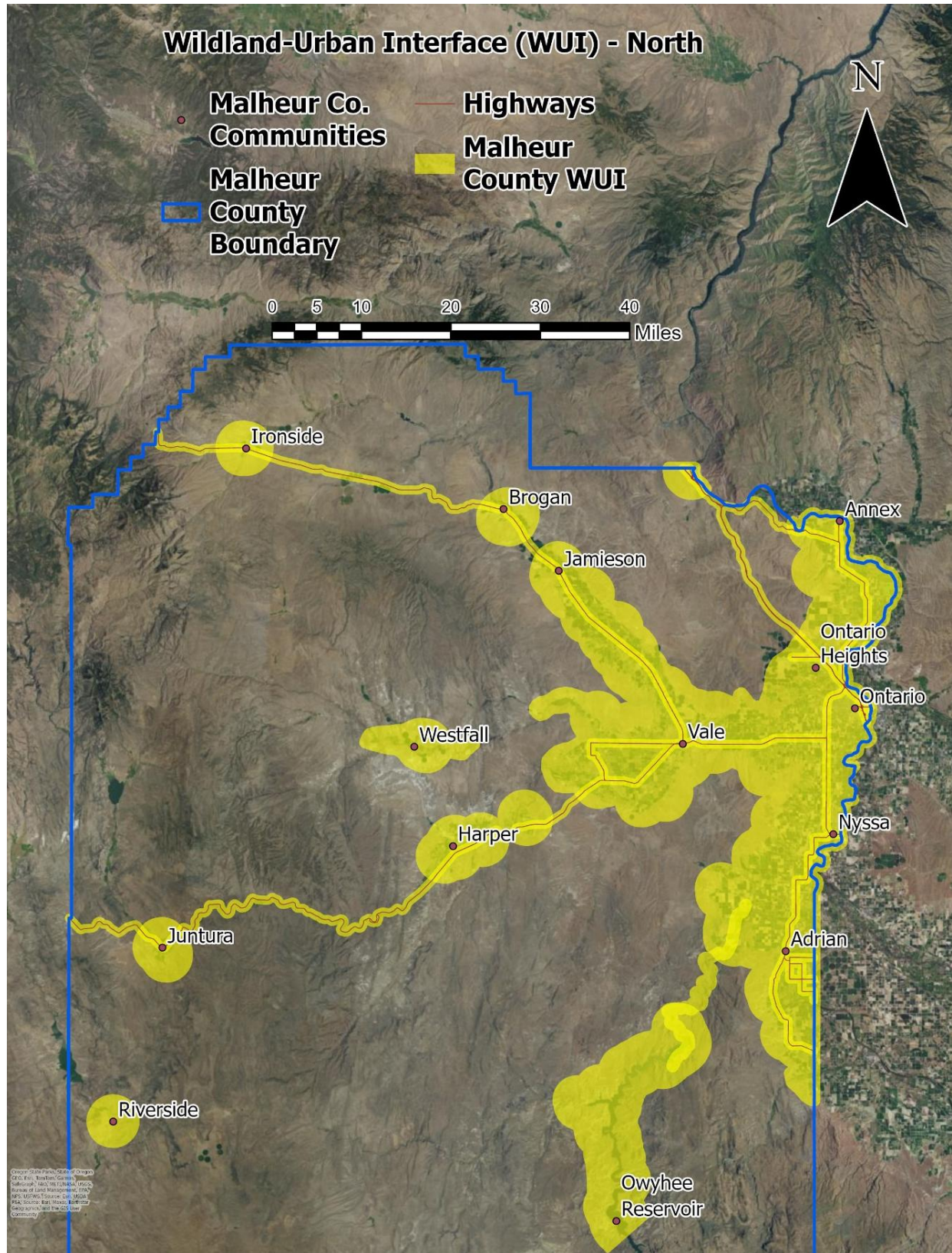
5.2.1.2 WUI Boundaries

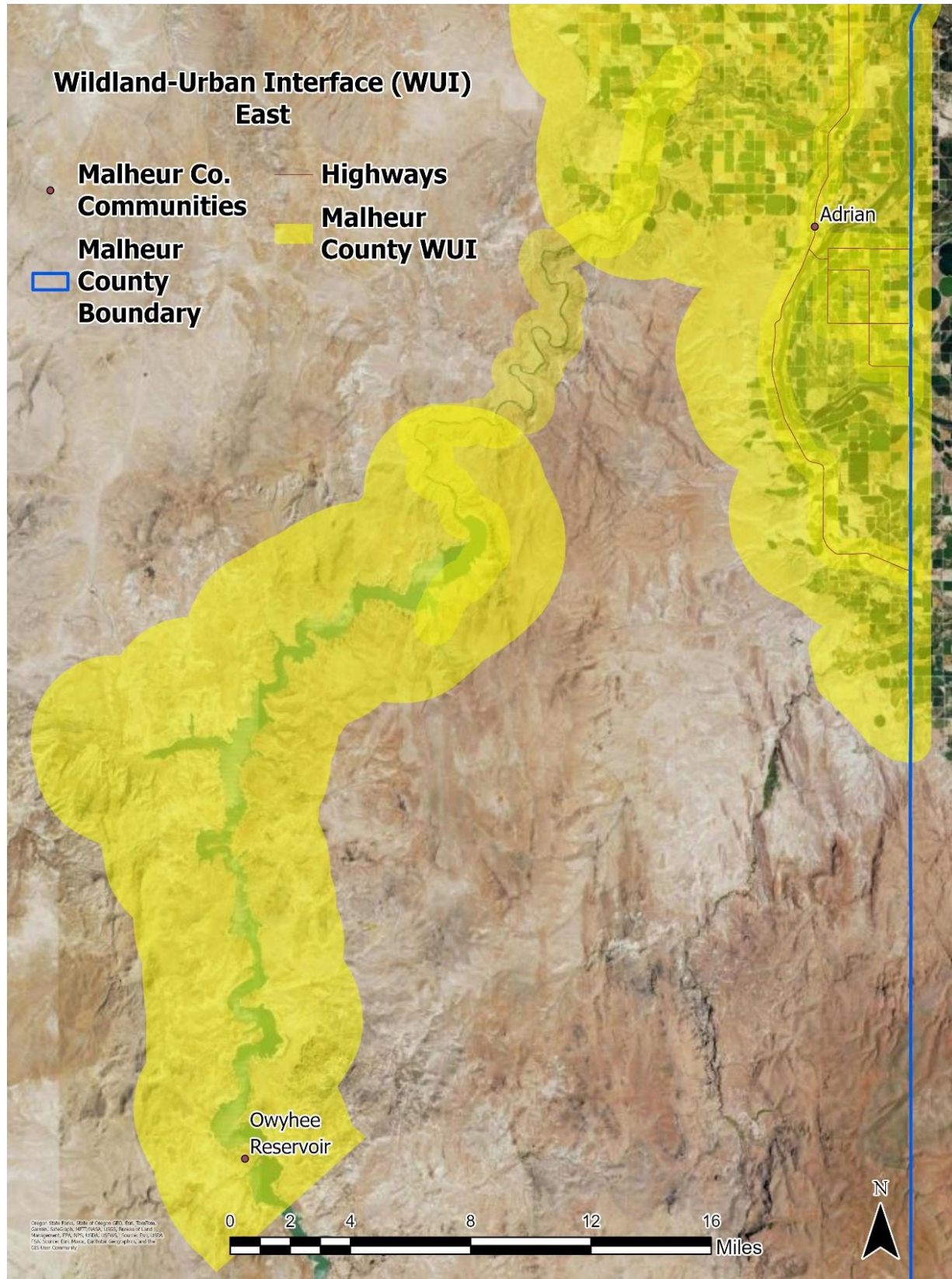
The figures included in this section depict the application of the WUI methodology, as described above in the previous section, and constraints selected by the planning team to Malheur County. The WUI maps included in this section are as follows:

- Wildland-Urban Interface (WUI) – North (Figure 5-4)
- Wildland-Urban Interface (WUI) – East (Figure 5-5)
- Wildland-Urban Interface (WUI) – Northeast (Figure 5-6)

⁸ [WUIMap_TechnicalGuide_062422.pdf](#)

⁹ <https://www.oregon.gov/odf/Documents/grants/2020-communities-at-risk-report.pdf>





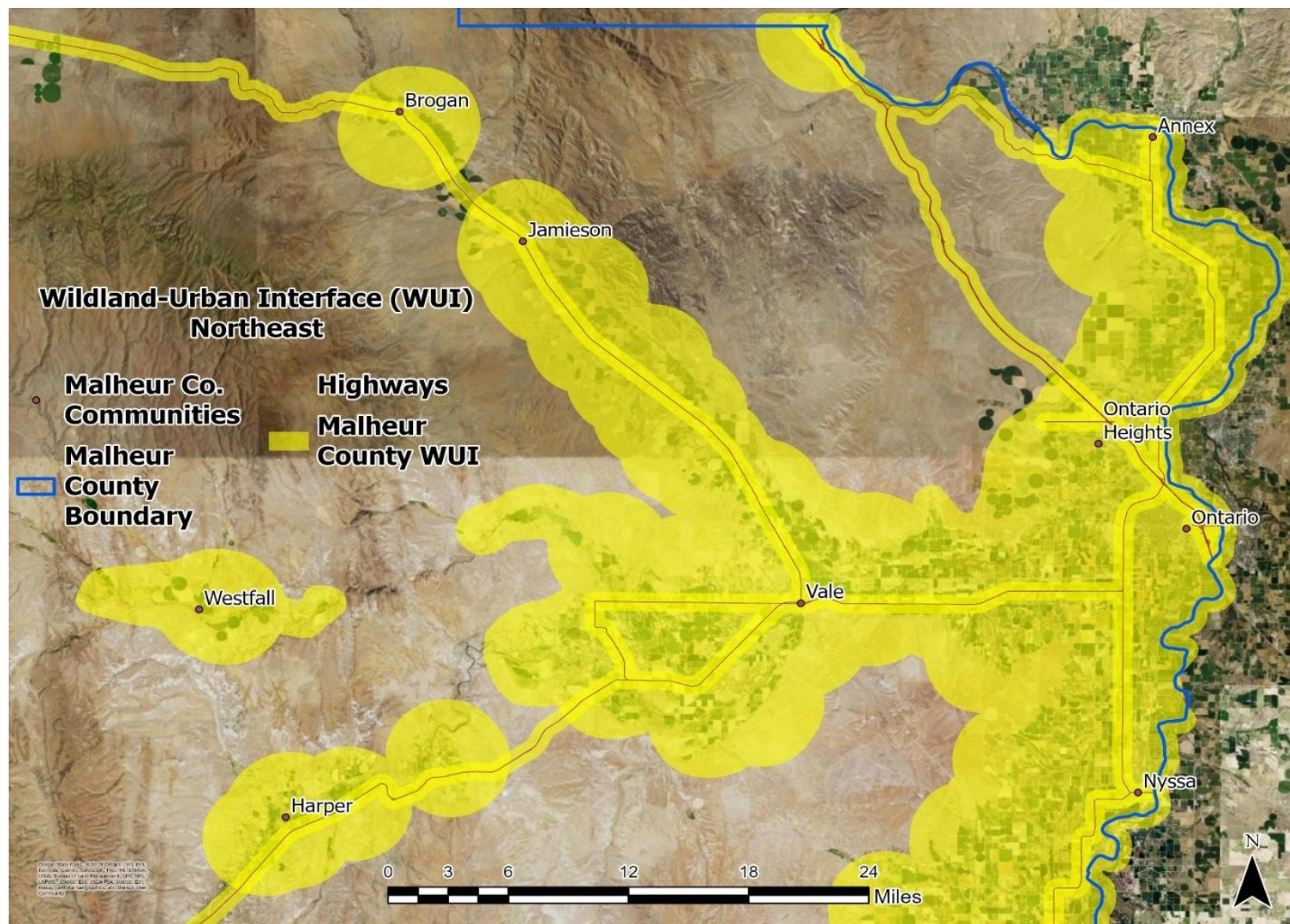


Figure 5-6) Northeast Wildland Urban Interface.

5.2.2 Communities at Risk (CAR) Assessments

Communities that were included within the WUI buffer, as described in the previous section, were further evaluated using the Communities at Risk assessment (CAR). The CAR, which was completed for the 2009 CWPP, evaluates the susceptibility of each community to wildfire using criteria from the ODF 2020 Communities At Risk Report. A scoring matrix was then used to select and assign scores to each community (Table 5-4). Scores were totaled and used to rank communities, relative to one another, based on their perceived levels of risk from wildfire (Table 5-5). These rankings are to be used to inform decisions related to the prioritization and implementation of mitigation projects during this planning cycle.

Table 5-4) Scoring matrix – factors used for ranking Malheur County Communities At-Risk.

Rating Factors for Communities-at-Risk	Point Breakdown
Likelihood of Fire Occurring: Historical fire starts data from BLM; based on occurrence rate per 1,000 acres.	1 pt - Low 2 pts 3 pts – Moderate 4 pts 5 pts – High
Topographic Hazard: Slope and aspect combined.	1 pt – 0% to 25% 3 pts – 25% to 40% 5 pts – more than 40%
Total Fuel Hazard: Surface and crown fuels combined.	1 pt – low hazard 3 pts – moderate hazard 5 pts – high hazard
Overall Fire Protection Capability: Equipment, training, preparedness, access to homes, structure density, etc.	1 pt – Low capability 3 pts – Moderate capability 5 pts – High hazard
Weather Factor: All of Malheur County received a high value of 3.	3 pts – High
Values at Risk: Taken from surveys and public input; major infrastructure, municipal water source, utility lines/pipelines, etc.	1 pt – Low 2 pts – High
Maximum Total	25 pts

5.2.2.1 Community Scores

CAR assessments were completed by members of the planning team and are largely based on their personal experiences and knowledge of the conditions within the communities for which they chose to complete assessments. The results of the analysis (Table 5-5) are not supported by scientifically validated methodology nor were they analyzed by a statistician or another qualified professional. This assessment was meant to be community oriented, with input being captured and presented in a manner that is accessible to everyone involved.

Table 5-5) Hazard ratings for communities located within the Wildland Urban Interface.

Local CAR Scoring	Likelihood of Fire Occurring	Topographic Hazard	Total Fuel Hazard	Overall Fire Protection Capability	Weather Factor	Values at Risk	Total
Adrian	3	5	3	5	3	2	21
Juntura	4	5	3	5	3	1	21
I-84 Corridor	3	3	5	3	3	2	19
Ironside	4	3	3	5	3	1	19
Jordan Valley	3	3	3	5	3	2	19
Rome	3	3	3	5	3	2	19
Vale	3	5	3	3	3	2	19
Basque Station	3	3	3	5	3	1	18
Harper / Westfall	2	5	1	5	3	2	18
Nyssa	4	1	3	5	3	2	18
McDermitt	3	1	3	5	3	1	16
Annex	3	1	1	3	3	1	12
TOTAL POSSIBLE POINTS							25

6 FIRE PROTECTION SYSTEMS AND CAPABILITIES

Fire protection is provided across the county in the form of structural or wildland fire protection (Figure 6-1 and Figure 6-2) Rangeland Fire Protection Associations in Malheur County). Structural fire protection is provided by cities or rural entities. Wildland fire protection is provided by the Bureau of Land Management (BLM) and groups of private local ranchers called Rangeland Protection Associations (RPAs). The Oregon Department of Forestry (ODF) offers minimal fire protection, which is primarily in the northern part of the county, where private timberland exists. Most Wildland agencies (BLM) or RFPAs are not equipped or qualified to respond to structural fires, while all structure protection districts are trained and authorized to respond to wildland fires. The following fire departments and districts are located within Malheur County or have protection authority/responsibility in the County through agreements:

6.1.1 Structure Fire Protection

6.1.1.1 *Adrian Rural Fire Protection District*

The Adrian Rural Fire Protection District is a volunteer fire agency based in Malheur County that provides emergency response, structural fire protection, and wildfire mitigation for the community of Adrian, Oregon, and the surrounding rural areas. Due to the region's geography and climate, they frequently coordinate with regional and state agencies to combat fast-moving grass and brush wildfires, such as recent incidents in the area. The Adrian Fire Protection District has one station with the following outlined apparatus:

- Engine 581
- Tender 582
- Brush 583
- Brush 584

6.1.1.2 *Nyssa Fire Department*

The Nyssa Fire Department is a cooperative emergency service agency serving the city of Nyssa, Oregon, and the surrounding Nyssa Rural Fire Protection District. Located in Malheur County along the Idaho border, the department operates primarily as a volunteer-staffed agency dedicated to protecting lives and property in the local agricultural community. The Nyssa Fire District has two stations and the following outlined apparatus:

- Brush 400
- Pumper 401
- Command/Utility 403
- Brush 404
- Pumper 451
- Brush 453

- Brush 455
- Pumper/Tender 450
- Tender 452
- Brush 454

6.1.1.3 Ontario Fire and Rescue

Ontario Fire & Rescue in Ontario, Oregon is a full-service emergency response agency providing 24/7 fire, medical, hazmat, and rescue services for the community and surrounding districts. Ontario Fire and Rescue has two stations with apparatus outline below:

- Rescue 1
- Engine 103
- Tower 199
- Multiple engines, brush units, tenders, and command vehicles
- HazMat 14A
- HazMat 14B
- Engine 101
- Brush and tender units

6.1.1.4 Vale Fire and Ambulance

Vale Fire & Ambulance provides fire suppression, emergency medical services, wildland response, technical rescue, and fire prevention for the Vale area. The department has operated since 1897, originally founded as a hook-and-ladder company. Vale Fire and Ambulance has three stations with apparatus outline below:

- Ladder 2
- Engine 251
- Rescue 2
- Ambulance 8
- Multiple brush trucks (Type 4 & Type 6)
- Multiple tenders
- Additional EMS units in Brogan and Harper

6.1.1.5 Jordan Valley Volunteer Fire Department (reorganized for the city in 2026) and Jordan Valley Rural Fire District

The Jordan Valley Volunteer Fire Department and Rural Fire District operate as a volunteer-staffed agency providing fire protection, rescue, and emergency medical services (EMS) to the cities of Jordan Valley and Arock in Malheur County, Oregon. The district also coordinates closely with the Jordan Valley Rangeland Fire Protection Association (RFPA) to handle expansive rangeland and wildland fire response in the high desert terrain near the Idaho border. They have one station with the apparatus outlined below:

- Rescue 15
- Engine 301
- Brush 301
- Tender 3331

6.1.1.6 Weiser Area Rural Fire District

The Weiser Area Rural Fire District (WARFD) is a mostly-volunteer fire and EMS agency serving Weiser, Idaho and surrounding rural areas in Washington County, Idaho and the area around Annex, Oregon. It operates as part of the unified Weiser Fire District, formed when the City of Weiser Fire Department and the Rural District combined operations in 2022 under a single leadership structure. The Weiser Area Rural Fire District has two stations with apparatus outlined below:

- Engine 753
- Tender 756
- Engine 701 / 703 / 706
- Ladder 704
- Brush 755 / 757
- Command Units

6.1.1.7 Payette Rural Fire District

The Payette Rural Fire District (PRFD) is a 501(c)(4) nonprofit fire-protection agency serving the rural areas surrounding Payette, Idaho. Its core mission is fire suppression in rural communities and assisting city fire crews when requested, making it a key partner to the City of Payette Fire Department. The City of Payette Fire Department handles urban fire response and volunteer recruitment, while PRFD covers the unincorporated rural areas. They frequently coordinate responses, and PRFD assists city crews when called. The Payette Rural Fire District shares one station with the city department and has the following apparatus outlined below:

- Engine 601
- Engine 602
- Engine 603 (Reserve)
- Engine 653
- Brush 606
- Brush 654
- Brush 657
- Tender 652
- Ladder 611
- Rescue 604
- Command 605

- Command 607
- Utility 651
- Rehab 655
- Heavy Rescue 659

6.1.1.8 Vale Rural Fire District

The Vale Rural Fire Protection District is one of the three agencies that operate together as Vale Fire & Ambulance in Vale, Oregon. It provides rural fire protection, supports EMS response, and participates in an all-hazards emergency service model alongside the City of Vale Fire Department and Vale Ambulance Service. The Vale Rural Fire District is integrated with the Vale Fire & Ambulance Fleet and has the following apparatus outlined below:

- Engine 251
- Brush 252, 253, 254
- Tender 261
- Additional engines, rescues, and ambulances shared across the system

6.1.1.9 Ontario Rural Fire Protection District

The Ontario Rural Fire Protection District (ORFPD #7-302) is the rural fire-protection agency serving the 50-square-mile unincorporated area surrounding Ontario, Oregon. It operates alongside Ontario Fire & Rescue, sharing facilities, apparatus, and personnel to provide coordinated fire protection for both city and rural residents. The Ontario Rural Fire Protection District shares a station with the city department and has the following apparatus outline below:

- Structural engines
- Brush/grass units
- Water tenders
- Rescue units
- Command vehicles

6.1.1.10 Nyssa Rural Fire Protection District

The Nyssa Rural Fire Protection District is the rural fire-protection partner to the City of Nyssa Fire Department. The District provides volunteer-based fire suppression and emergency response to the agricultural and unincorporated areas surrounding Nyssa. The Nyssa Rural Fire Protection District shares a station with the city department and has the following apparatus outlined below:

- Brush 400
- Pumper 401
- Command/Utility
- Brush 404

- Pumper 451
- Brush 453
- Brush 455
- Pumper/Tender 450
- Tender 452
- Brush 454

6.1.2 Rangeland Fire Protection Associations

IRONSIDE RFPA

VALE RFPA

JORDAN VALLEY RFPA

JUNTURA RFPA

BLUE MOUNTAIN RFPA

Many significant large fires have occurred across Malheur County, some resulting in the utilization of the Conflagration Declaration. The Conflagration Declaration is a state legal authority established as a civil defense measure to mobilize structural fire suppression resources for massive urban fires. This Declaration allows Oregon State Fire Marshal (OSFM) to mobilize structural firefighting resources through the Oregon State Mutual Aid System (OFMAS) to help protect communities. The declaration is authorized by the Governor and can only be implemented when wildfire imminently threatens life or structures, and the local or mutual aid suppression resources aren't available.

The Conflagration Declaration only works for areas that are within an established and state recognized fire district. Most of the county does not qualify for this option.

There are only a few areas within the county that are considered "no man's land" where no official fire protection exists, however, there is technically no area without any wildland fire protection. In areas where there is no fire district, fire protection authority sits with the Sheriff's office. To improve fire response in the under protected areas of Malheur County, many ranch owners have banded together to form Rangeland Fire Protection Associations (RFPAs). In Malheur County, five associations have formed: Blue Mountain RFPA, Vale RFPA, Juntura RFPA, Jordan Valley RFPA, and the first association formed, Ironside RFPA. These RFPAs are authorized to fight wildland fires only and do not provide structure fire protection. As a long-term strategy for improving fire response, the CWPP committee encourages efforts that would provide some level of wildland fire protection coverage for all unprotected lands within Malheur County.

The Bureau of Land Management has fire stations across Malheur County, in Vale, Juntura, Jordan Valley, and Burns Junction. The Vale station is staffed year-round, while the Burns Junction, Jordan Valley, and Juntura guard stations are staffed during fire season.

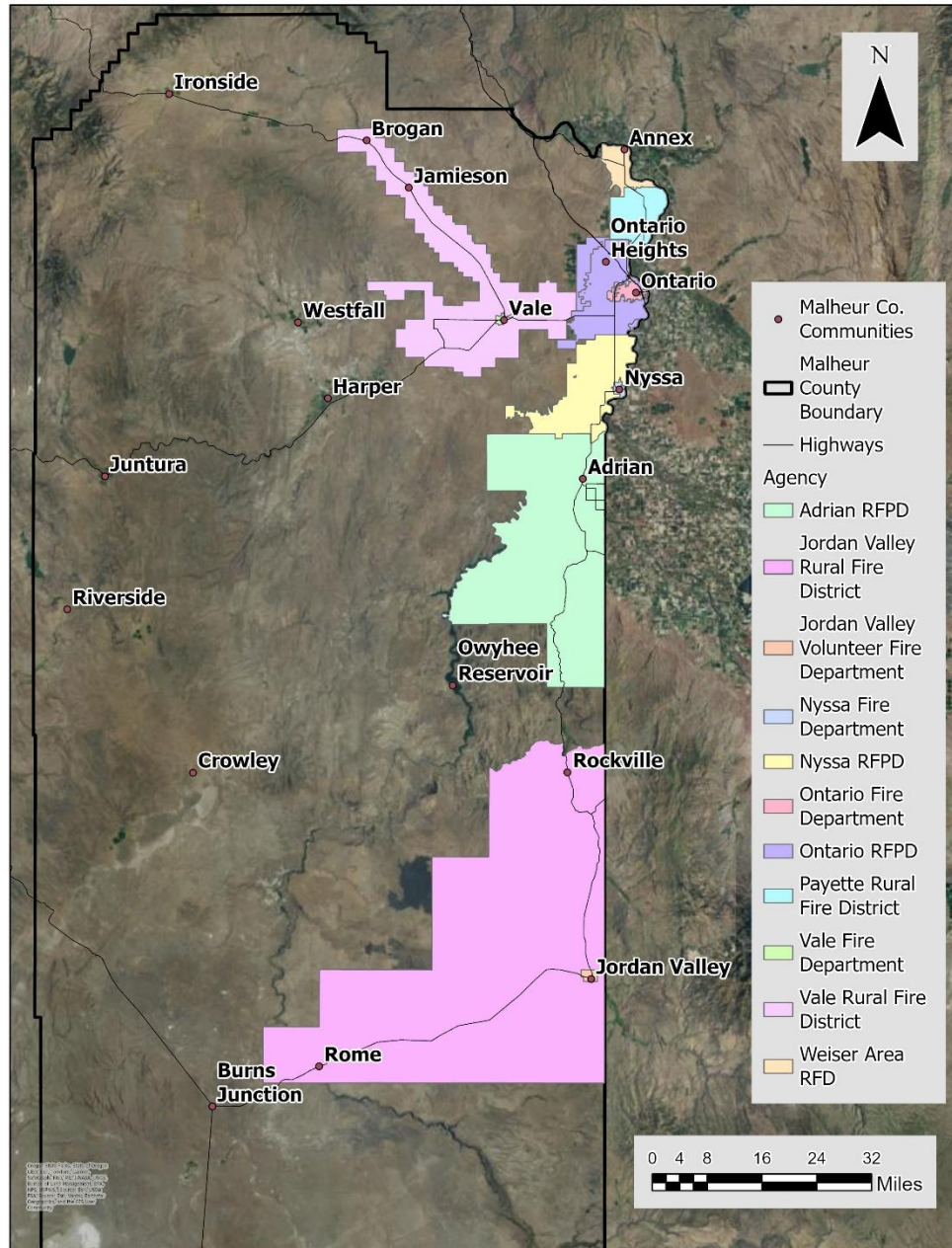


Figure 6-1) Boundaries of fire departments and districts within Malheur County, OR

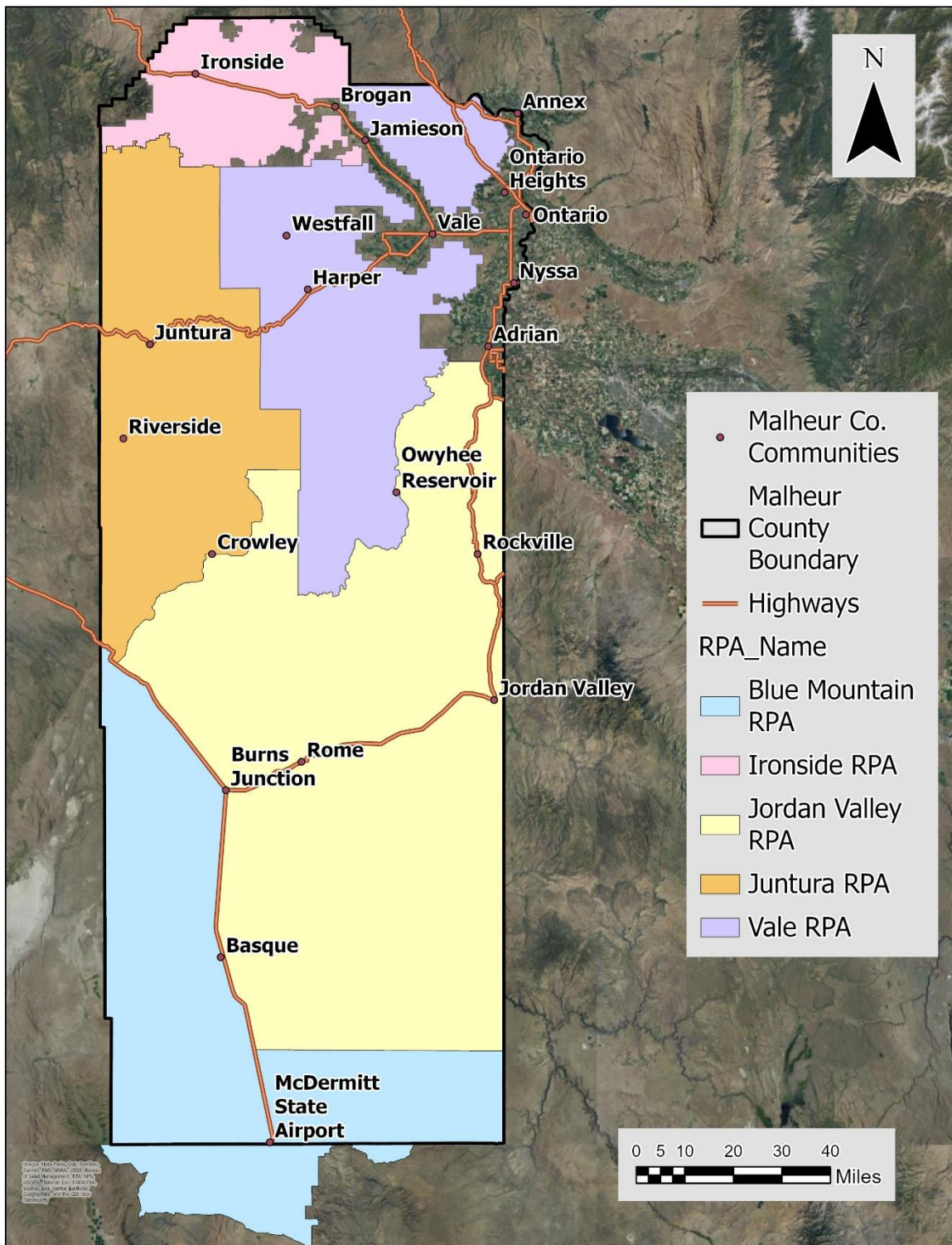


Figure 6-2) Rangeland Fire Protection Associations in Malheur County

7 PUBLIC SAFETY AND INVOLVEMENT

7.1 PUBLIC OUTREACH AND AWARENESS

7.1.1 Community Participation

The continued involvement of the public is essential for the development, review, and implementation of the recommendations in the Malheur County Wildfire Protection Plan. Copies of the plan will be available at the Malheur County Planning Department office, Malheur County public libraries, and on the Malheur County Emergency Management website.

Any continued dialogue about the mission set forth in this plan with the public is always appreciated. The website provides an opportunity to send comments and/or questions to the point of contact for the committee at any time.

7.1.2 Information Campaigns

Public outreach efforts include the delivery of fire prevention information to the public during community events, at key government offices and retailers, school programs, and through the placement of signage. Due to the proximity of Malheur County to media outlets from the Treasure Valley in Idaho, the use of radio and newspaper as a means of communication is somewhat ineffective. The best approach is for agency personnel to conduct public outreach efforts within their jurisdiction.

7.1.3 Firewise USA

Developed by the National Fire Protection Association (NFPA), this program aims to educate the public on ways they can better protect themselves and their homes against severe damage and total loss from wildfire. This free program features educational materials that help home and landowners better understand fire behavior, reduce their homes risk through fire resilient landscaping, family, and neighborhood safety plans, etc. Along with an interactive and resource-filled website, the program offers training throughout the nation. Many Firewise USA workshops have been held across northeast Oregon where citizens and local agencies participated. The following websites provide additional information related to Firewise USA and other readiness programs and resources:

- **National Fire Protection Association (NFPA) – Firewise USA:**
 - Website: <http://www.firewise.org>
- **Oregon State Fire Marshal – Oregon Wildfire Programs:**
 - Website: <https://www.oregon.gov/osfm/wildfire/pages/default.aspx>

7.1.4 Emergency Preparedness

Public safety is an important aspect of this plan. Education and collaboration can help protect lives, private property, and other key values from wildfire. Through this public safety objective, partnerships are formed between private property owners and businesses, non-profit organizations, county, state, and federal agencies to increase the likelihood that homes, businesses, and other developed properties survive wildfire events.

7.1.5 Evacuation

When wildfire threatens a community, the County's collective priority is to protect life. The aim of an evacuation is to reduce the threat to life by relocating people who are in a high risk area. By removing or reducing the threat to life from an area, firefighters can avoid the split focus of worrying about people in the hazard area as they work to suppress the fire and protect property.

For more information about emergency preparedness, evacuation plans, and other types of evacuation preparedness refer to the following websites:

- **Oregon Wildfire Response & Recovery – Before Wildfires**
 - Website: <https://wildfire.oregon.gov/prepare>
- **American Red Cross – Emergency Preparedness Tips from the Red Cross**
 - Website: <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies.html>

Evacuation can be an alarming and stressful situation especially when someone isn't prepared. There are many resources available to the public regarding the preparation of an emergency kit. Some recommended items include:

- Food and Water (enough for you, your family, and pets)
- Any necessary medications (also including your pets)
- Important documents (birth certificate, social security cards, marriage license, pet vaccination records/certificates, home or land deed, photos, etc.)

A community that maintains defensible space around homes may significantly reduce the need to evacuate residents. Additionally, the creation of defensible space will increase the likelihood that a home survives a wildfire.

When necessary, during evacuations, communities will be advised of locations open as shelters that provide cover, food, and information to those displaced by wildfire. The American Red Cross (ARC) has a national mandate to provide these services. Locally, the ARC is integrated into Malheur County's emergency plan. The ARC also supports evacuees in obtaining emergency prescription medications and serves as a conduit for health or welfare messages between evacuees and family/friends. The Malheur County Sheriff's

Office will be the leading agency in protecting property within evacuated areas and in establishing traffic control points related to wildfire.

Another important aspect of preparing for evacuation is creating an evacuation plan. This is especially helpful if there are multiple people, children, or people who require assistance with mobility in a residence. Having an evacuation plan that contains emergency contacts, meeting location and evacuation routes can lessen the stress if an evacuation were to occur.

7.1.5.1 Pets/Livestock

Most families own pets and many also keep small numbers of horses, goats, chickens, sheep and/or cattle whose emergency needs must be addressed. When battling wildfire, firefighters will do what they can, but they are not responsible for evacuating animals - that responsibility is yours. When creating an evacuation plan and making your emergency evacuation kits include items for your pets and livestock.

7.1.5.2 Re-Entry

Re-entry occurs when the incident commander of the agency with jurisdiction determines it is safe to enter the previously evacuated area. This isn't always immediate and changes on a case-by-case basis. This is another reason why preparing an evacuation kit is useful as you, your family or pet may require readily available items like medication. You will not be allowed to re-enter the evacuated area until this notice is given. ***Plan ahead!***

7.1.6 Home Site Assessments

Consider how you access your home. Firefighters will always consider, prior to engaging, the risk associated with property access. Firefighters may utilize structural firefighting equipment, engines, brush rigs, or tenders to protect homes from wildfire. These vehicles are often large and require more space to turn around than cars or pickups. The clearing and maintenance of roads and driveways is important for firefighter access. Overgrown roadside vegetation could become a flaming front and firefighters. Other considerations for access include the grade, composition, and dimensions of access roads, driveway characteristics, the presence of overhead utility lines, culverts, bridges, turnouts, etc. If these factors, or others, increase risk to firefighters then they may be unable to protect your property. Even if firefighting resources are staged at a property, they may be forced to leave if access becomes limited or compromised. These factors also affect ingress and egress for residents during evacuations.

Clearly marked rural address numbers at the start of your access greatly aids fire suppression efforts. Remember, firefighters may be working in the dark or in low light conditions to protect your home. Homeowners who are interested in getting help from professionals can have their property assessed by representatives from the OSFM, BLM, or the local fire districts. More information is included in the following section.

OSFM Defensible Space Program

This section is a direct excerpt from the OSFM Defensible Space Program website.

Wildfire risks are rising, and preparation has never been more critical. The OSFM's Defensible Space Program is here to help Oregonians protect their homes and communities through proactive, practical measures.

Scheduling a free defensible space assessment is easy and ensures your property is better protected from the next wildfire season. The assessment is an education-focused visit that gives home and property owners tips to start or improve their defensible space.

Defensible space—a strategically managed area around your home—can be the deciding factor in preventing embers from igniting your property. By acting now, you can help create a fire-adapted community, reducing risks for everyone.

Join the movement to protect Oregon's homes, lives, and landscapes. Schedule your free assessment and take the first step toward a safer future. Together, we can face the wildfire challenge with resilience.

Go to www.oregondefensiblespace.org to schedule a free assessment, read the OSFM comprehensive guide for homeowners, read the draft Oregon Defensible Space Model Code, and provide comments or questions about the development of the model defensible space code.

Table 7-1) Sources of additional information regarding defensible space. This table was recreated from the publication Oregon Defensible Space for Homeowners¹⁰ -refer to the original publication for more information.

More Information		
Defensible Space Program	<i>Oregon State Fire Marshal</i> • oregondefensiblespace.org • (503) 934-0874 • Scan the QR code to learn more	
Insurance	<i>Division of Financial Regulation</i> • (503) 947-7980 • DFR.InsuranceHelp@oregon.gov	
Local Burn Restrictions	Contact your local fire agency	
Evacuation Information	<i>Oregon Wildfire Response & Recovery</i> • (503) 378-2911 • oem_publicinfo@oem.oregon.gov	
Firewise USA®	Scan the QR code to learn more	

¹⁰ *Oregon Defensible Space for Homeowners & Renters*. Version 1. Multiple Agencies. Available online at: <https://www.oregon.gov/osfm/Documents/Defensible%20Space%20Checklist.pdf>

7.1.1 Smoke and Air Quality

The Clean Air Act, passed in 1963 and amended in 1977, is the primary legal authority governing air resource management. The Clean Air Act provides the principal framework for national, state, and local efforts to protect air quality. Under the Clean Air Act, OAQPS (Office for Air Quality Planning and Standards) is responsible for setting standards, also known as national ambient air quality standards (NAAQS), for pollutants which are considered harmful to people and the environment. OAQPS is also responsible for ensuring these air quality standards are met, or attained (in cooperation with state, Tribal, and local governments) through national standards and strategies to control pollutant emissions from automobiles, factories, and other sources.

Smoke emissions from fires potentially affect an area and the airsheds that surround it. Climatic conditions affecting air quality in Oregon are governed by a combination of factors. Large-scale influences include latitude, altitude, prevailing hemispheric wind patterns, and mountain barriers. At a smaller scale, topography and vegetation cover also affect air movement patterns. Air quality in the area is generally moderate to good. However, locally adverse conditions can result from occasional wildland fires in the summer and fall, and prescribed fire and agricultural burning in the spring and fall. All major river drainages are subject to temperature inversions which trap smoke and affect dispersion, causing local air quality problems. This occurs most often during the summer and fall months. Winter inversions are less frequent, but are more apt to trap smoke from heating, winter silvicultural burning, and pollution from other sources.

7.2 MITIGATION STRATEGIES FOR HOMEOWNERS

This section describes different actions that homeowners can take to make their homes more resistant to wildland fire. Such actions include the creation and maintenance of defensible space, construction of and modification to structures and homes, wildfire resistant landscaping, fuel treatments, and improved access for firefighters. However, these recommendations are not all inclusive. Community members who have other ideas to help protect their community can contact one of the committee members at any time to discuss other ways in which Malheur County can be more resilient to wildfires.

7.2.1 Wildfire Home Hardening and Construction

7.2.1.1 Home Ignition Zones

This section is a direct excerpt from the “Preparing homes for wildfire” section of the National Wildfire Protection Association website¹¹. The following information describes

¹¹ *Preparing homes for wildfire*. National Fire Protection Association. Found online at: <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire>. Accessed March 17, 2025.

different actions that homeowners can take to create defensible space and reduce fire risk on their property and around their homes.

What are the primary threats to homes during a wildfire?

Research around home destruction vs. home survival in wildfires point to embers and small flames as the main way that the majority of homes ignite in wildfires. Embers are burning pieces of airborne wood and/or vegetation that can be carried more than a mile through the wind can cause spot fires and ignite homes, debris and other objects.

There are methods for homeowners to prepare their homes to withstand ember attacks and minimize the likelihood of flames or surface fire touching the home or any attachments. Experiments, models and post-fire studies have shown homes ignite due to the condition of the home and everything around it, up to 200' from the foundation. This is called the Home Ignition Zone (HIZ) (Figure 7-1).

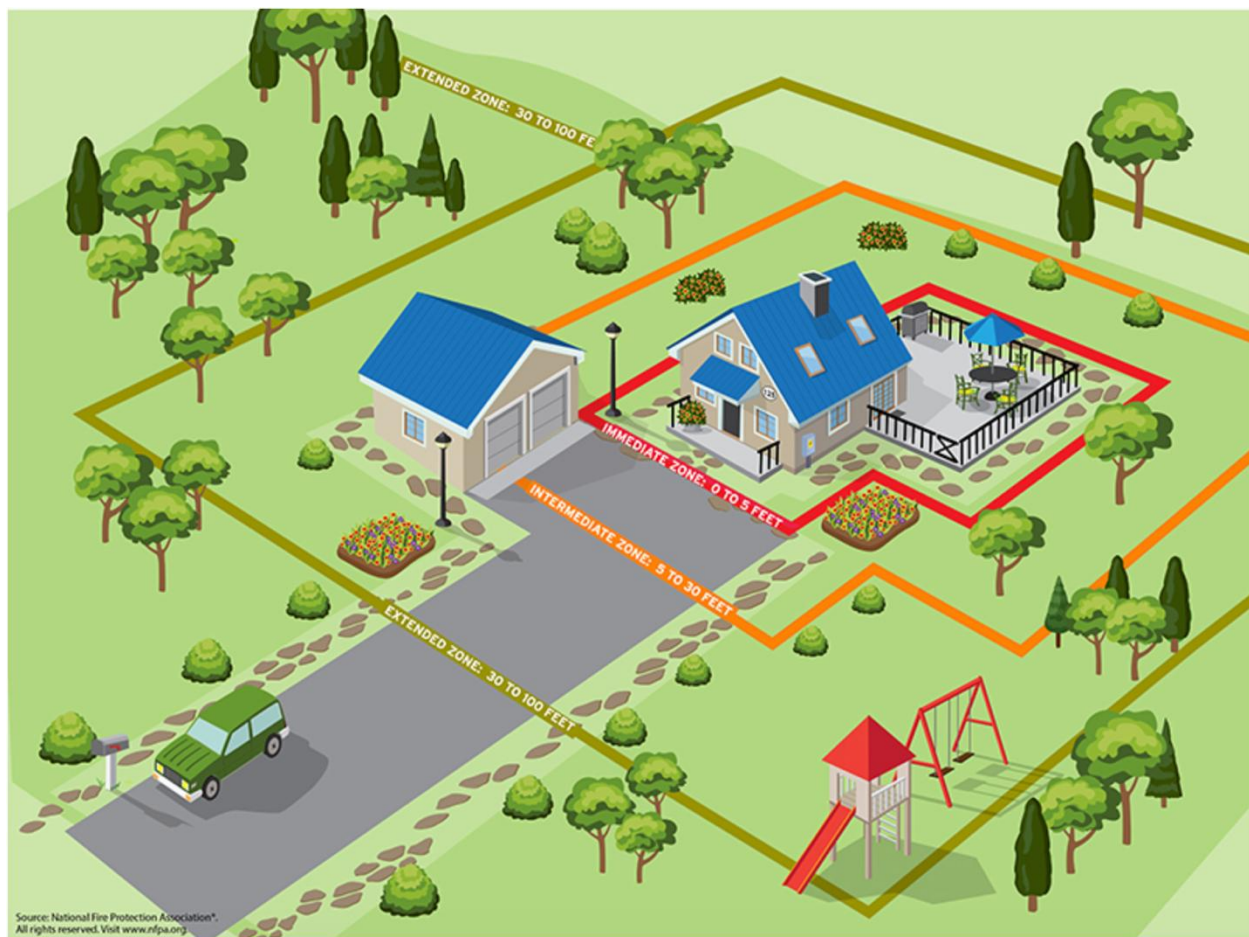


Figure 7-1) Depiction of the Home Ignition Zone (HIZ). The HIZ consists of three different zones (Immediate Zone, Intermediate Zone, and Extended Zone) around a home in which specific actions can be taken to reduce ignition potential.

The concept of the home ignition zone was developed by retired USDA Forest Service fire scientist Jack Cohen in the late 1990s, following some breakthrough experimental research into how homes ignite due to the effects of radiant heat. The HIZ is divided into three zones.

Immediate Zone

The home and the area 0-5' from the furthest attached exterior point of the home; defined as a non-combustible area. Science tells us this is the most important zone to take immediate action on as it is the most vulnerable to embers. **START WITH THE HOUSE ITSELF** then move into the landscaping section of the Immediate Zone.

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Reduce embers that could pass through vents in the eaves by installing 1/8 inch metal mesh screening.
- Clean debris from exterior attic vents and install 1/8 inch metal mesh screening to reduce embers.
- Repair or replace damaged or loose window screens and any broken windows Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating.
- Move any flammable material away from wall exteriors – mulch, flammable plants, leaves and needles, firewood piles – anything that can burn. Remove anything stored underneath decks or porches.

Intermediate Zone

5-30' from the furthest exterior point of the home. Landscaping/hardscaping- employing careful landscaping or creating breaks that can help influence and decrease fire behavior (Figure 7-2).

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways/paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height.
- Space trees to have a minimum of eighteen feet between crowns with the distance increasing with the percentage of slope.
- Tree placement should be planned to ensure the mature canopy is no closer than ten feet to the edge of the structure.

- Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.

30-100 feet, out to 200 feet. Landscaping – the goal here is not to eliminate fire but to interrupt fire’s path and keep flames smaller and on the ground.

- Dispose of heavy accumulations of ground litter/debris.
- Remove dead plant and tree material.
- Remove small conifers growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.
- Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops.*
- Trees 60 to 100 feet from the home should have at least 6 feet between the canopy tops.*

**The distances listed for crown spacing are suggested based on NFPA 1144. However, the crown spacing needed to reduce/prevent crown fire potential could be significantly greater due to slope, the species of trees involved and other site specific conditions. Check with your local forestry professional to get advice on what is appropriate for your property.*

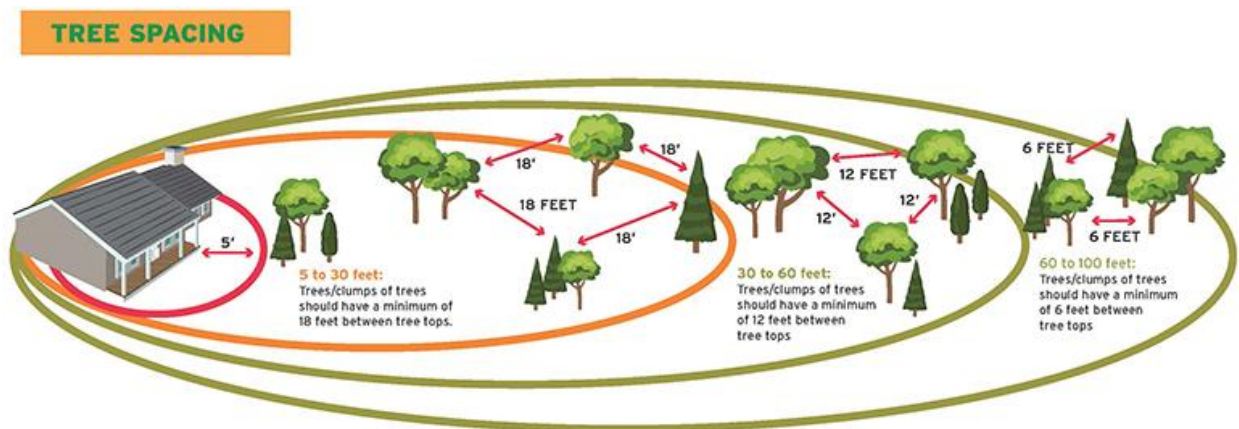


Figure 7-2) Recommended tree spacing in each part of the Home Ignition Zone (HIZ). In general, spacing between individual trees or small groups of trees should increase the closer they are to the home or another structure.

7.2.1.2 Wildfire Resistant Codes and Standards

This section is a modified excerpt from the report “Building a Wildfire-Resistant Home: Codes and Costs” published in November 2018 by Headwater Economics¹². The following information describes the different sets of codes and standards that advise the construction and improvement of homes and structures within wildland fire environments.

¹² Quarles, Stephen L. and Kelly Pohl. *Building a Wildfire-Resistant Home: Codes and Costs*. Headwaters Economics, November 2018. Available online at: <https://headwaterseconomics.org/wildfire/homes-risk/building-costs-codes>

Wildfire resistant codes and standards define construction requirements for the home by component parts (e.g., roof, walls, etc.) and often provide multiple options for complying with the provisions. Many of the requirements are based on standard laboratory testing methods that evaluate the ability of a material or assembly to resist ignition or fire spread. California is one of only a few states to have adopted a wildfire-related building code at the state level for areas of high hazard (California Chapter 7A), but many cities and counties have adopted portions of other wildfire-related codes.

These wildfire-related documents are described and compared below and in Table 7-2. Key terminology is also defined below.

International Code Council: International WUI Code (IWUIC)

Chapter 5 in the IWUIC provides specifications for three ignition-resistant (IR) construction classes, designated IR 1, IR 2, and IR 3. The ignition-resistant class level depends on the fire hazard severity zone, and whether the water supply and defensible space requirements are in compliance. IR 1 has the most restrictive requirements and IR 3 the least restrictive. The three-tier set of requirements is unique to the IWUIC. By comparison, NFPA 1144 has only one level of building construction requirements, which are applicable regardless of the fire hazard severity zone ranking.

The IWUIC provides explicit language about the need to maintain buildings, vegetation, and defensible space. Maintenance is a critical component for homes and landscapes.

NFPA 1144: Standard for Reducing Structure Ignition Hazards from Wildland Fire

NFPA 1144 is designated as a standard, but if adopted by a jurisdiction, it can serve as a building code. This standard provides a methodology for assessing the potential for wildland fire ignition around existing buildings and provides minimum requirements for reducing the potential for ignition. A feature of this standard, as well as other wildfire-related building codes used in the United States, is linking building survival with vegetation selection and placement on the property, and construction materials and design.

This standard provides the user with information to do an assessment of the building components and vegetation on the property. The assessment results in a list documenting materials and components used on or attached to the building, location on the property relative to topographical features and location on slope, and location of vegetation. The standard also provides specific minimum requirements for new construction and information for modifying vegetative fuels in the structure ignition zone (as described in section 7.2.1.1 *Home Ignition Zones*).

Definitions

Many of the terms used in this section that describe favorable performance, as it relates to materials or structures, are used interchangeably, even though they may have different technical definitions. Different wildfire codes may have discrepancies but are generally based on traditional laboratory tests that determine a material's response or reaction to fire. The following definitions are important to understanding information related to wildfire resistant codes and standards and wildfire resistant construction:

Wildfire-Resistant: A general term used in this report to describe a material and design feature that can reduce the vulnerability of a building to ignite, either from wind-blown embers or other wildfire exposures.

Fire-Resistant: Materials and systems that resist the spread of fire from the fire-exposed to a nonexposed side of an assembly (i.e., a wall or roof).

Ignition-Resistant: Material that resists ignition or sustained flaming combustion. Materials designated ignition-resistant have passed a standard test that evaluates flame spread on the material.

Noncombustible: 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.

Table 7-2) This table is a modified version of “Table 3.1: Comparison of WUI Codes and Standards” from the report *Building a Wildfire-Resistant Home: Codes and Costs* published by Headwaters Economics (November 2018).

Comparison of WUI Codes and Standards		
Component	IWUIC (2018) (Ignition-Resistant Class 1)	NFPA 1144 (2018)
Roof		
Roof	Class A fire-rated covering required. Plug gaps at the end (i.e., bird-stop) and underlayment full length of any valleys.	Class A fire-rated covering required. Roof covering must be tested using all components in the as-built assembly. Where gaps exist between covering and roof deck, a roll-roofing product shall be laid over the entire deck surface and gaps at end and ridge plugged with a noncombustible material.
Eaves & Fascia	Eaves and soffits protected by ignition-resistant material or one-hour fire-resistant-rated construction, or 1-inch fire-resistant treated lumber, or ¾-inch plywood. Fascias required, protected by ignition-resistant material or 1-hour fire-resistant-rated construction, or 2-inch dimensional lumber.	Eaves must be enclosed with fire retardant-treated wood, ignition-resistant materials, noncombustible materials, or materials exhibiting resistance to wildfire penetration. Metal drip-edge required on eave edges.
Gutters	Noncombustible gutter (vinyl gutters not allowed). Use of gutter cover is required.	Use of noncombustible gutter and gutter cover device required.
Vents	Vents covered by 1/4-inch mesh screen. Vents in exterior walls shall not exceed 144 square inches or shall be designated/approved to prevent flame or ember penetration into the structure. Vents not allowed in under-eave areas. Gable end and dormer vents shall be >10 feet from lot line. Underfloor vent openings located as close to grade as practical.	Vents covered by 1/8-inch mesh screen or use of vents designed to resist flame intrusion and embers. Vents not allowed in under-eave area.
Exterior Walls		
Siding	Specifies compliance with one of five methods: 1) one-hour fire-resistant-rated construction, 2) approved noncombustible materials, 3) heavy timber or log wall construction, 4) fire-retardant-treated wood on exterior side (rated for exterior use), or 5) ignition-resistant materials on exterior side.	Specifies ignition-resistant material (including exterior fire-retardant-treated wood) or an assembly with at minimum a one-hour fire rating. Six-inch noncombustible vertical separation required between a horizontal surface and siding.

Windows	At a minimum, all windows (including doors and skylights) shall be dual pane (multilayered) with tempered glass, or glass blocks or fire-resistant rated of not less than 20 minutes.	Requires all windows (including in doors and skylights) to be tempered glass, multilayered glazed panels, glass block, or fire-resistance rating of not less than 20 minutes.
Doors	Approved noncombustible construction, solid-core wood not less than 1¾-inches thick, or fire protection rating of not less than 20 minutes.	Solid-core wood not less than 1¾-inches thick, constructed of noncombustible material, or fire protection rating of not less than 20 minutes.
Decks		
Decks	One-hour fire-resistant-rated construction, heavy timber construction, or constructed with noncombustible materials, or fire-retardant-treated wood or other ignition-resistant materials. A deck extending over a slope greater than 10% must be enclosed to within 6 inches of the ground using same exterior wall construction standards.	Requires heavy timber, noncombustible materials, fire-retardant-treated wood, or other ignition-resistant material, or be a one-hour fire-resistance-rated assembly.
Near-Home Landscaping		
Near-Home Landscaping	Does not explicitly address near-home landscaping but addresses fuel modifications in 30+-foot defensible space area.	Does not explicitly address near-home landscaping but addresses location and maintenance of vegetation in two zones, including from the home to 30-feet, and from 30-feet to 100-feet, or to the property line.

7.2.1.3 Wildfire Resistant Construction

This section is a modified excerpt from the report “Building a Wildfire-Resistant Home: Codes and Costs” published in November 2018 by Headwater Economics¹². The following information describes materials that should be used for the construction and improvement of homes and structures within wildland fire environments.

Regardless of whether it is required by code within a jurisdiction, individual builders and homeowners can act to mitigate wildfire vulnerabilities with little added cost. Home survival in wildfire-prone areas depends on effective implementation of a coupled approach where 1) vegetation (and other combustible materials) on the property is wisely selected, located, and maintained; and 2) materials and design features of the home are selected that will reduce vulnerability to anticipated wildfire exposures. Homes threatened by wildfires will always be subjected to wind-blown embers. Therefore, all homes in wildfire-prone areas should include design details that minimize vulnerability to embers. The likelihood of a long-term radiant heat or flame contact exposure will be less likely on properties that have developed and continue to maintain an effective defensible space in terms of selection, location, and maintenance of vegetation and other combustible materials on the property.

Roof

The roof is arguably the most vulnerable area of the home because of its large surface area. Embers can ignite vegetative debris that has accumulated on the roof surface or in gutters. Embers also can enter the attic through roof and under-eave vents. Also, unenclosed eaves and overhangs can trap embers and heat. Key mitigations for the roof include:

1. Install a Class A fire-rated covering or assembly.
2. Where applicable, install bird stops at roof edge, including any ridges. An additional layer of protection can be attained if a layer of roll roofing is installed over the surface of the roof deck.
3. For complex roof designs where there are junctions between a roof and a wall (e.g., dormers), consider noncombustible siding.
4. The under-eave area should be constructed using a soffited eave design.
5. Both inlet (under-eave) and outlet (roof or gable) vents can be vulnerable to ember entry.
 - a. Vents should be covered with 1/8- to 1/16-inch noncombustible and corrosion-resistant screening. Vents covered with 1/16-inch screening should be cleaned regularly so that they can perform their moisture management function.
 - b. Ridge or off-ridge vents are less vulnerable than gable end vents.
 - c. Use of vents approved by the California Office of the State Fire Marshal Building Materials Listing Program, which have demonstrated a resistance to ember and flame exposures.

Exterior Walls

Exterior walls are especially vulnerable from exposure to flames or prolonged exposure to radiant heat, such as from burning vegetation or a neighboring home. These exposures can potentially ignite combustible siding products. Some plastic siding products (e.g., vinyl) can also melt, exposing underlying sheathing. Wind-blown embers can accumulate in gaps or pass through openings around windows and doors. Glass in a window or door can break from radiant heat or flame contact, exposing the interior of the home. Wildfire-resistant siding and installation design features, tempered glass in windows, wildfire-resistant doors, and weather-stripping can reduce home vulnerability.

The relative importance of each of these items varies depending on home-to-home spacing and the location of vegetation on the property. If there is a home or neighboring building within 30 feet, the potential for radiant heat from that structure—should it ignite—may be enough to ignite siding or break glass in windows, so additional mitigations may be necessary. Siting on the property relative to topography and typical wind directions can also be important factors in determining necessary external wall mitigations. Key mitigations for exterior walls include:

1. Make sure there is, at a minimum, a 6-inch noncombustible zone at the base of the wall (i.e., between the ground and start of siding).
2. Install multi-pane windows having tempered glass.
3. When vinyl windows are used, make sure single- and double-hung windows include metal reinforcement in interlock members.
4. If there is a home or neighboring building within 30 feet, use ignition-resistant or noncombustible siding and metal shutters.

Deck

Embers can ignite vegetative debris or other combustible material stored or accumulated on top of a deck. If ignited, the burning deck could expose walls, windows, and doors to radiant heat. Embers can ignite decking materials directly when they accumulate on the surface of vulnerable decking, typically occurring in the gaps between deck boards. Decks can also ignite from below when vegetation or stored materials ignite beneath the deck. Mitigations to make a deck wildfire-resistant include using wildfire-resistant materials for walking surface (e.g., composite boards), using foil-faced bitumen tape on the top surface of the support joists, and creating a noncombustible zone underneath the deck.

Current wildfire codes and standards are inconsistent in their recommendations for decks, but key mitigations for decks include:

1. For deck boards, use noncombustible materials, fire-retardant treated wood, or decking products that meet the requirements of an ignition-resistant material. Non-fire-retardant treated redwood and cedar are vulnerable to ignition from ember

exposures. Higher density decking products (e.g., plastic composite or imported tropical hardwood decking products) are less vulnerable to ignition from ember exposures. If used, plastic composite decking products should comply with the requirements of the California Office of the State Fire Marshal Building Materials Listing Program.¹³

2. To reduce the likelihood of sustained flaming of ignited decking, install deck boards using a 1/4-inch gap between deck boards and install a foil-faced bitumen tape product on the structural support joists.
3. If an attached deck overhangs a steep slope, particularly with shrub or woodland vegetation that is not on the property or that cannot be maintained, use of a solid surface deck with an enclosed underside is a better option.
4. Incorporation of a noncombustible zone under the footprint of all attached decks is critical.

Near-Home Landscaping

If ignited by wind-blown embers, burning vegetation and other combustible materials near the home can allow flames to touch the home or subject it to an extended radiant heat exposure, potentially igniting siding or breaking glass in windows. Maintaining a noncombustible zone of five feet around the entire perimeter of the house and outer edges of the deck can significantly reduce the vulnerability of the home. Mitigations include using rock instead of bark mulch on top of landscape fabric. Placing landscape fabric underneath the area can reduce the growth of weeds, thereby minimizing the maintenance needed by the homeowner. Key mitigations for landscaping include:

1. Follow readily available guidance on creating an effective defensible space on your property in a radius of at least 100 feet from the home (or to the property line).
2. Create a near-home noncombustible zone within 5 feet of the home and under the entire foot print of any attached deck.
3. A noncombustible fence section should be used for 5 to 8 feet where the fence connects to the home.

7.2.2 Fire-Resilient Plants

The OSU Extension Service in Redmond has developed a pamphlet suggesting specific types of vegetation that may reduce wildfire risk around the home. Most people prioritize aesthetics when they landscape their property, but it is more important to consider whether a plant or shrub is flammable and could increase wildfire risk around a home. This brochure describes the different plants and materials that homeowners can use for landscaping that will complement their home while improving the chances that their home survives a wildfire.

¹³ California Office of the State Fire Marshal Building Materials Listing Program. Available at: http://osfm.fire.ca.gov/strucfireengineer/strucfireengineer_bml

Brochures have been distributed at public meetings and are available at the ODF office or through the OSU Extension Service office in Redmond. Visit their online site:

<https://extension.oregonstate.edu/catalog/pub/pnw-590-fire-resistant-plants-home-landscapes>

This national prevention program guides homeowners step-by-step through the process of eliminating hazards around their home. This newspaper publication shows how to create survivable space around your home, taking account the 20 Malheur County Community Wildfire Protection Plan. Fire-resistant plants are plants that don't readily ignite from a flame or other ignition sources. Although fire-resistant plants can be damaged or even killed by fire, their foliage and stems don't contribute significantly to the fuel and, therefore, the fire's intensity. topography and vegetation that surrounds it. The newspaper is available locally through ODF or on-line at <http://pnwfireprevention.com/prevention/living>.

7.2.3 Fuels Treatment Opportunities

Forestlands

Fuels treatment can vary depending on the landscape and vegetation. However, all fuels treatments are designed to reduce the present load on the ground and reduce it to better protect against wildfire. Fuels treatments can be but aren't limited to burning, thinning, mastication, chipping, mowing, etc. All are designed to reduce fuel levels. Fuels treatments best work when they're combined with other efforts such as logging or prescribed burning. These practices, when implemented on the landscape, also reduce the amount of available fuel should a wildfire event occur.

Rangelands

A healthy rangeland is the best defense against large wildfire. Large wildfires in Malheur County are associated with loss of grazing opportunities that have affected the economics associated with the ranching community of the county; once a wildfire moves across the landscape, invasive weeds and grasses fill in the next season. Landowners are encouraged to work with specialists from BLM or NRCS on ways to improve rangeland health that will also lead to mitigating the detrimental effects of large wildfire. Not only could those agencies assist landowners in determining the best way to return the landscape to natural vegetation following a wildfire, they can also assist in treating invasive weeds. NRCS may be able to offer cost-share assistance through their conservation program that could also create a more fire-adaptive ecosystem.

Effective fuels treatments for rangeland include grazing, mowing, plowing/discing, irrigation, controlled burning, herbicide application, and re-seeding to natural vegetation.

7.2.4 Firefighter Access

The first consideration for firefighters in any situation during a wildfire is safety. Firefighters must be able to quickly and effectively attack a fire, but this is only possible if a site or home can be accessed safely. Firefighters use a variety of firefighting equipment such as engines, brush trucks, or tenders to protect homes from wildfire. These specialized vehicles require more space to turn around and higher clearances than regular pickup trucks.

Firefighters will first consider if accessing a home will put them at risk while attacking a fire. Criteria that are often considered include:

- Does the access road have proper clearance overhead?
- Is there adequate space on a property to turn a vehicle around?
- Is there more than one way out?
- Are there multiple structures down a road?
- Have suppression forces reviewed the area prior to the emergency?

As a homeowner, here are some points to consider when evaluating your home and whether emergency responders can access your property safely:

- **Navigation:** Make sure address numbers are clearly posted at the beginning of your driveway. It can be difficult for firefighters to find a specific home in rural areas, especially if they are attempting to find a home or property in the dark.
- **Defensible Space:** A home or property must have defensible space before firefighters commit to providing protection. This is, primarily, a safe area from which firefighters can monitor and fight wildfire.
- **Ingress and Egress:** Driveways and access roads must be large enough to accommodate larger emergency response vehicles. Roads must be clear of vegetation and, if possible, provide a space to turn vehicles around.
- **Utilities:** Consider posting signage for overhead utilities that may provide clearance issues for larger vehicles.

8 MITIGATION STRATEGY

Critical to the effectiveness of this CWPP is the development and implementation of an integrated schedule of action items. The action items included in this plan were identified and selected after costs and effectiveness at protecting life, property, and the natural environment were evaluated by the planning team. This schedule, in combination with actionable mitigation projects, is the strategy that will be used to address and mitigate the impacts of wildland fire in Malheur County.

Each mitigation action item was developed based on local knowledge, historical events, and current conditions. However, the components of risk and the preparedness of county residents and resources are not static so it will be necessary to review and modify the projects and implementation schedule at least annually. These modifications will reflect changes in the components of risk, population density and distribution, infrastructure modifications, and other factors as well.

The following is a brief overview of how the different fields in the MAI tables were populated and the criteria used to assign ratings and values.

- **Project I.D.:** This is a unique identifier for projects in the table.
- **Project Name:** A general idea of where and what the project is (e.g. Rural Road Fuel Break).
- **Project Type:**
 - **Planning:** Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of wildland fire.
 - **Mitigation:** Wildfire mitigation actions are on-the-ground treatments of wildland fuels that are implemented to reduce the threat of wildfire. These actions can take place before, during, or after a wildfire has occurred and should consider other hazards (e.g. post-fire flooding / debris flows, smoke) and factors (e.g. invasive species) that may compound wildland fire threats.
 - **Education:** Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Education efforts most often concern the public and could be related to health hazards related to smoke, wildfire hazards in the wildland-urban interface, evacuation, etc.
 - **Capacity Building:** Obtaining funding, resources, training, etc. that enhances the ability of firefighters to protect themselves and the public from fire and related hazards.
- **Map:** Reference to the map on which a project is delineated (this will most likely be used for projects that fall in the mitigation category or for those that concern fuel breaks).

- **Project Location:** Describes where a project will take place (this could be a general location within the county, an address, a segment of road, etc.).
- **Project Description:** The description of the project includes as much detail as is necessary for future planning partners to understand the purpose and objectives of the project.
- **Sources of Funding:** A general idea of where funding for the project will come from (county, state, federal, or some other funding source).
- **Involved Organizations:** Includes any entities that may have an interest in the project (project planning, land or property ownership, project execution, expertise, etc.).
- **Projected Completion Date:** This is the anticipated date by which a project will be completed. Completion dates might also imply priority of the project or how urgent a project is.

8.1 FUELS TREATMENT AREAS

8.1.1 BLM Treatment Descriptions

Project I.D.	Project Name	Type	Map	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
BLM-1	BLM Infrastructure Firewise USA	Mitigation		Birch Creek Ranch, Lake Owyhee Road, Chukar Park, and others	Fuels reduction, asset hardening, water source development, fire protection, and ignition management (engineering) at key recreation and administrative sites with economic, historical, cultural, and/or archeological significance and value.	BLM Community Assistance activity funding	BLM	On-going
BLM-2	Owyhee Irrigation Wildfire Risk Reduction	Mitigation and Education		Adrian, Nyssa, Vale, and Ontario	Road improvement and fuel breaks, utility line protection, establishing pump chance sites on the canal, herbicide applications to control invasives, and wildfire prevention and Firewise USA techniques education to water users and public.	BLM Community Assistance grant, and OID	BLM, OID	2029
BLM-3	WUI Fuel Breaks	Mitigation	A	Vale, Ontario, Jordan Valley, Arock, Rome, Burns Junction Jct., Basque, McDermitt	In collaboration with permittees and range specialists, efforts will focus on monitoring the annual buildup of tumbleweeds. Prescribed fire will be utilized to manage and reduce the accumulation of tumbleweed skeletons along fence lines, waterways, roadways, and infrastructure, with the strategy adaptable to evolving conditions.	BLM Hazardous Fuels funding	BLM	On-going
BLM-4	Tri-State WUI Fuel Breaks	Mitigation	B	Jordan Valley, Arock, Rome, Burns Junction Jct., Basque, McDermitt	The Vale District Bureau of Land Management (BLM), in collaboration with the Boise and Winnemucca BLM offices, has developed a comprehensive plan for large-scale fuel reduction efforts. This plan is centered on implementing fuels management strategies and establishing essential fuel breaks, including the creation of 497 miles of linear fuel breaks on the Oregon side of the state line.	BLM Hazardous Fuels funding	BLM	On-going
BLM-5	NW Malheur Restoration and Fuel Breaks	Mitigation	C	Juntura, Beulah	The Vale District Bureau of Land Management (BLM) has crafted an extensive plan for large-scale fuel reduction efforts focused on implementing fuels management and ecosystem restoration treatments within the Northwest Malheur County Greater Sage-Grouse Habitat Restoration Project Area, located within the Malheur Resource Area. This initiative includes the establishment of 150 miles of linear fuel breaks.	BLM Hazardous Fuels funding	BLM	On-going

Project I.D.	Project Name	Type	Map	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
BLM-6	SODA Fuel Breaks	Mitigation	D	Rockville, Jordan Valley	Following the 2015 Soda Fire, the Vale District Bureau of Land Management (BLM), in collaboration with the Boise BLM, developed a comprehensive plan focused on implementing strategic fuel breaks to enhance fire management and reduce future wildfire risks.	BLM Hazardous Fuels funding	BLM	On-going
BLM-7	Vale WUI Fuel Breaks	Mitigation	E	Vale, Adrian, Nyssa	127 miles of constructed and maintained fuel breaks adjacent to communities on BLM and private lands.	BLM Hazardous Fuels funding	BLM	On-going

8.1.2 Fuels Treatment Maps

8.1.2.1 Map A: Alternative 5 Fuel Break Routes

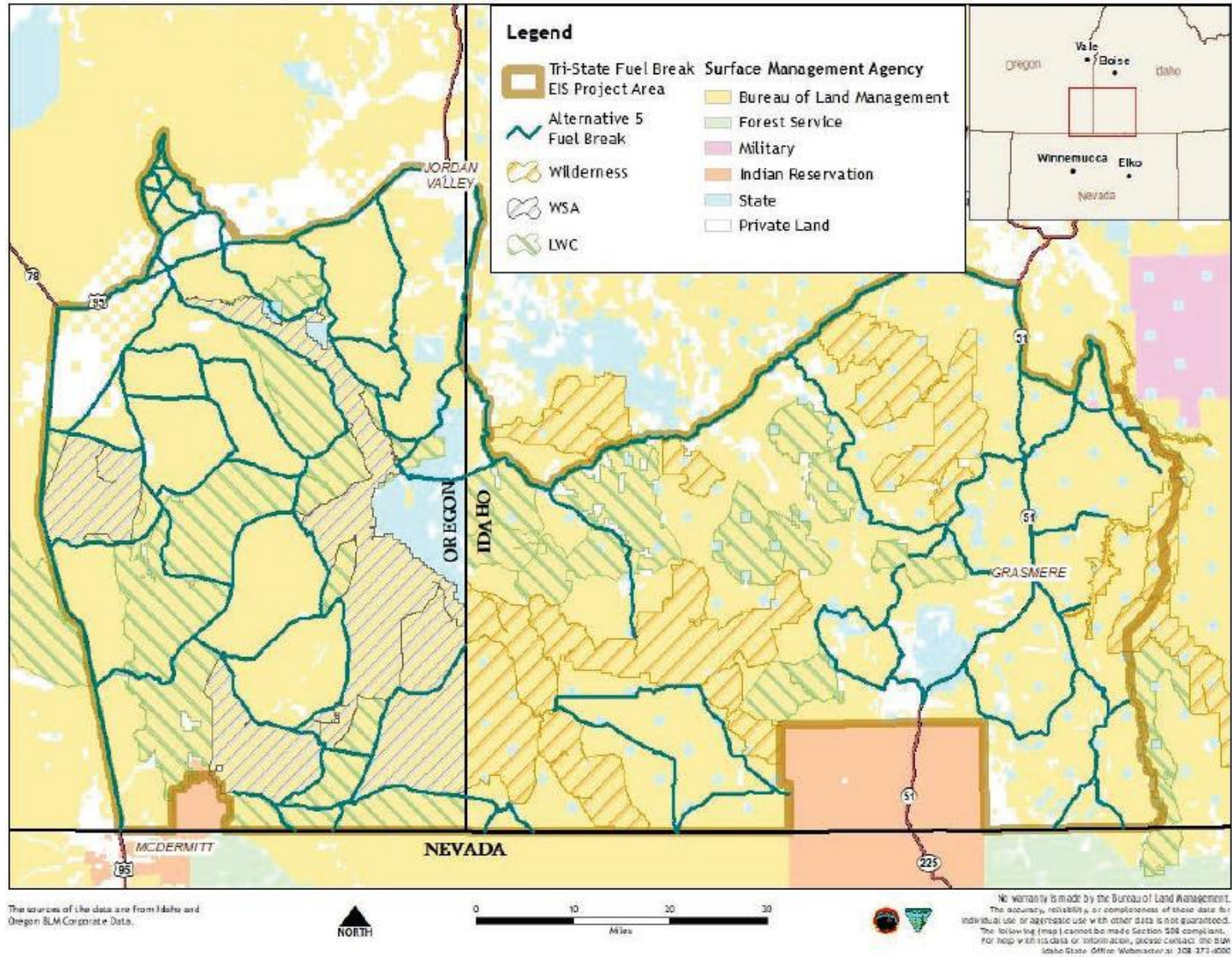


Figure 8-1) This project is originally from the Tri-state Fuels Breaks Project Final EIS (DOI-BLM-ID-B000-2015-0001-EIS; Appendix Q: Maps).

8.1.2.2 Map B: Tri-State Fuel Break EIS Project Area

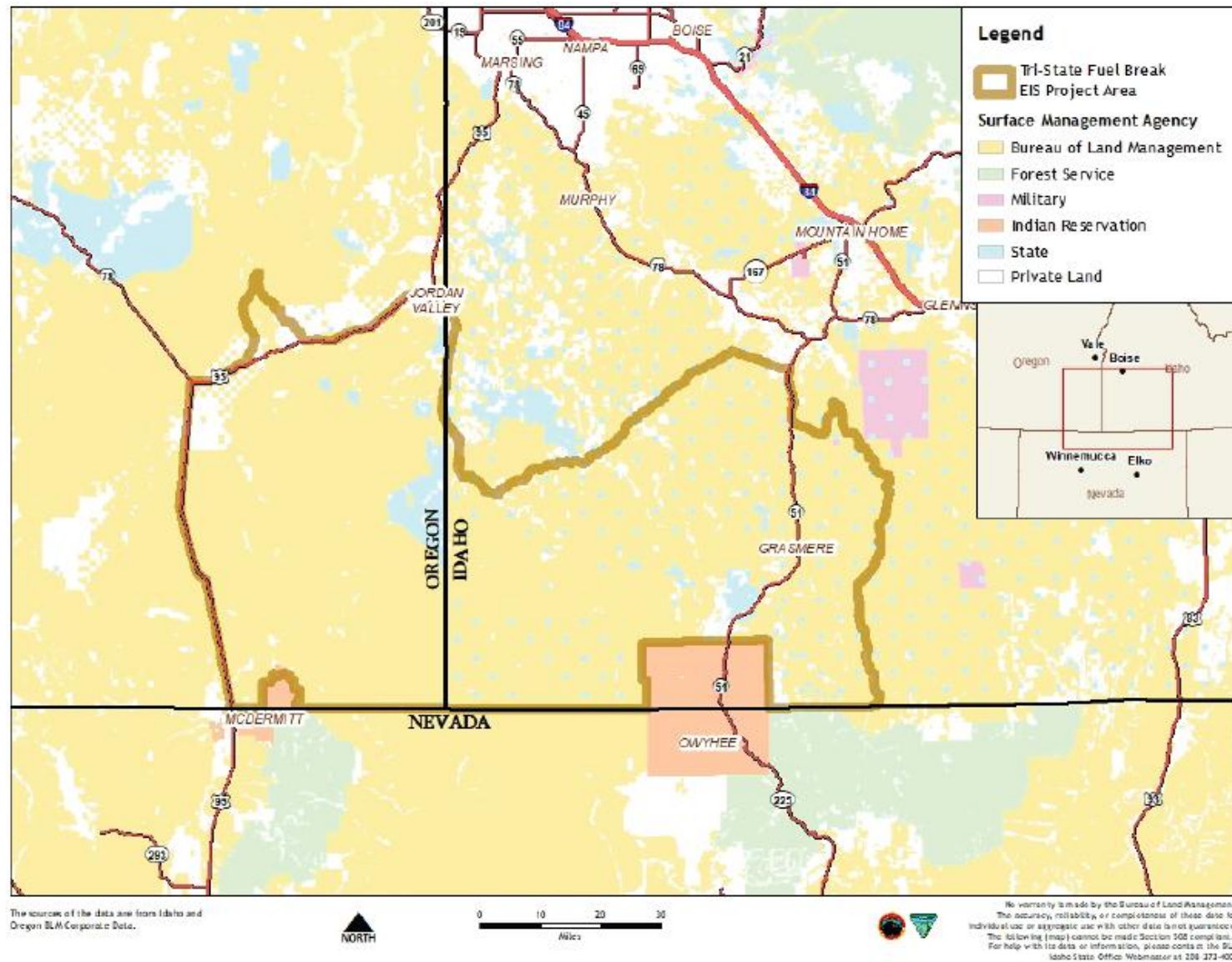


Figure 8-2) This project is originally from the Tri-state Fuels Breaks Project Final EIS (DOI-BLM-ID-B000-2015-0001-EIS; Appendix Q: Maps).

8.1.2.3 Map C: NW Malheur County Fuel Breaks

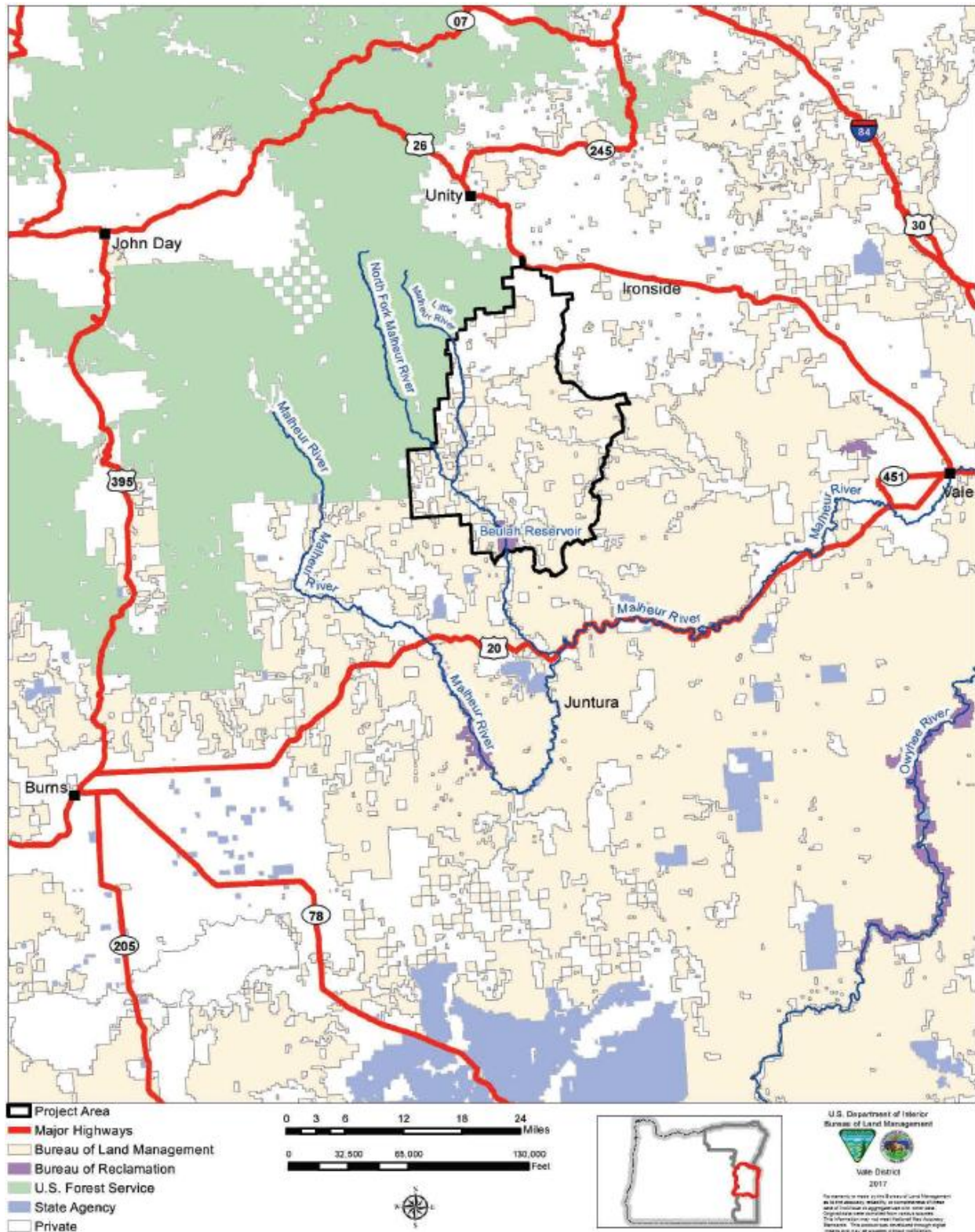


Figure 8-3) NW Malheur County Fuel Breaks: Project Area Vicinity. This project map is originally from the Tri-state Fuels Breaks Project Final EIS (DOI-BLM-ID-B000-2015-0001-EIS; Appendix Q: Maps).

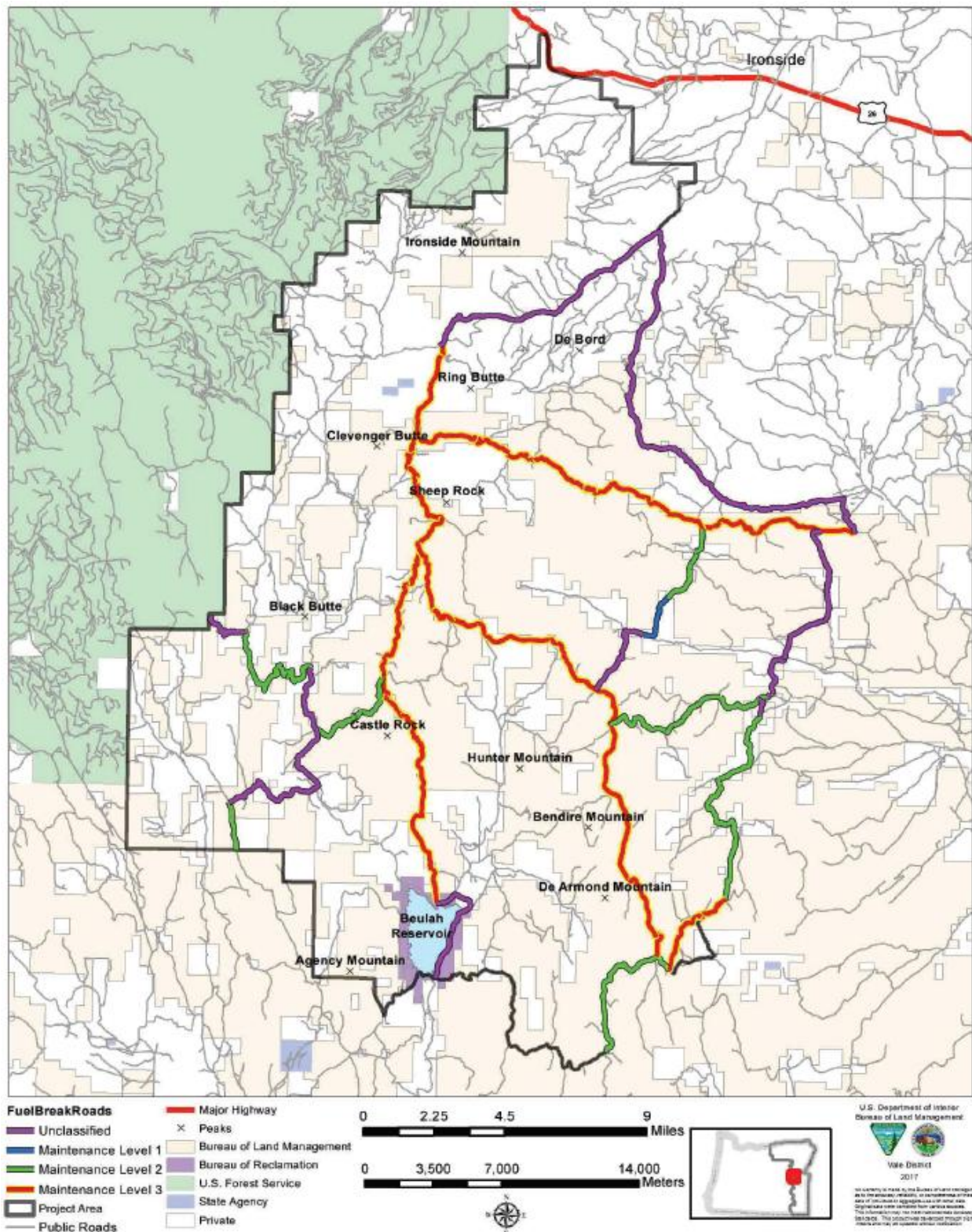


Figure 8-4) NW Malheur County Fuel Breaks: Proposed Fuel Breaks. This project map is originally from the Tri-state Fuels Breaks Project Final EIS (DOI-BLM-ID-B000-2015-0001-EIS; Appendix Q: Maps).

8.1.2.4 Map D: Soda Fire Fuel Breaks Project

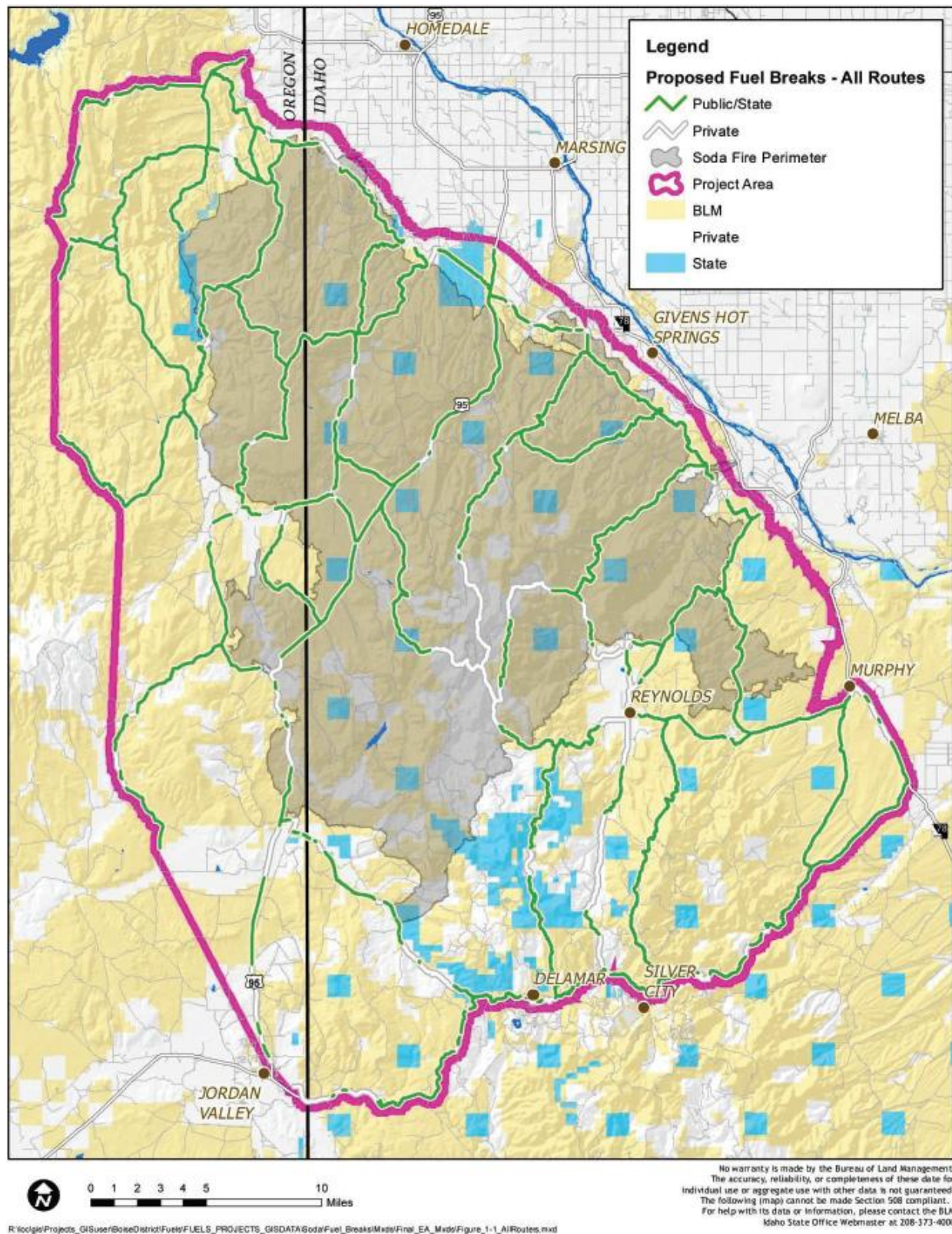


Figure 8-5) Soda Fire Fuel Breaks Project: Proposed Fuel Breaks. This project map is originally from the Soda Fire Fuel Breaks Project EA (DOI-BLM-ID-B030-2016-0003-EA).

8.1.2.5 Map E: Vale WUI – Vicinity Map

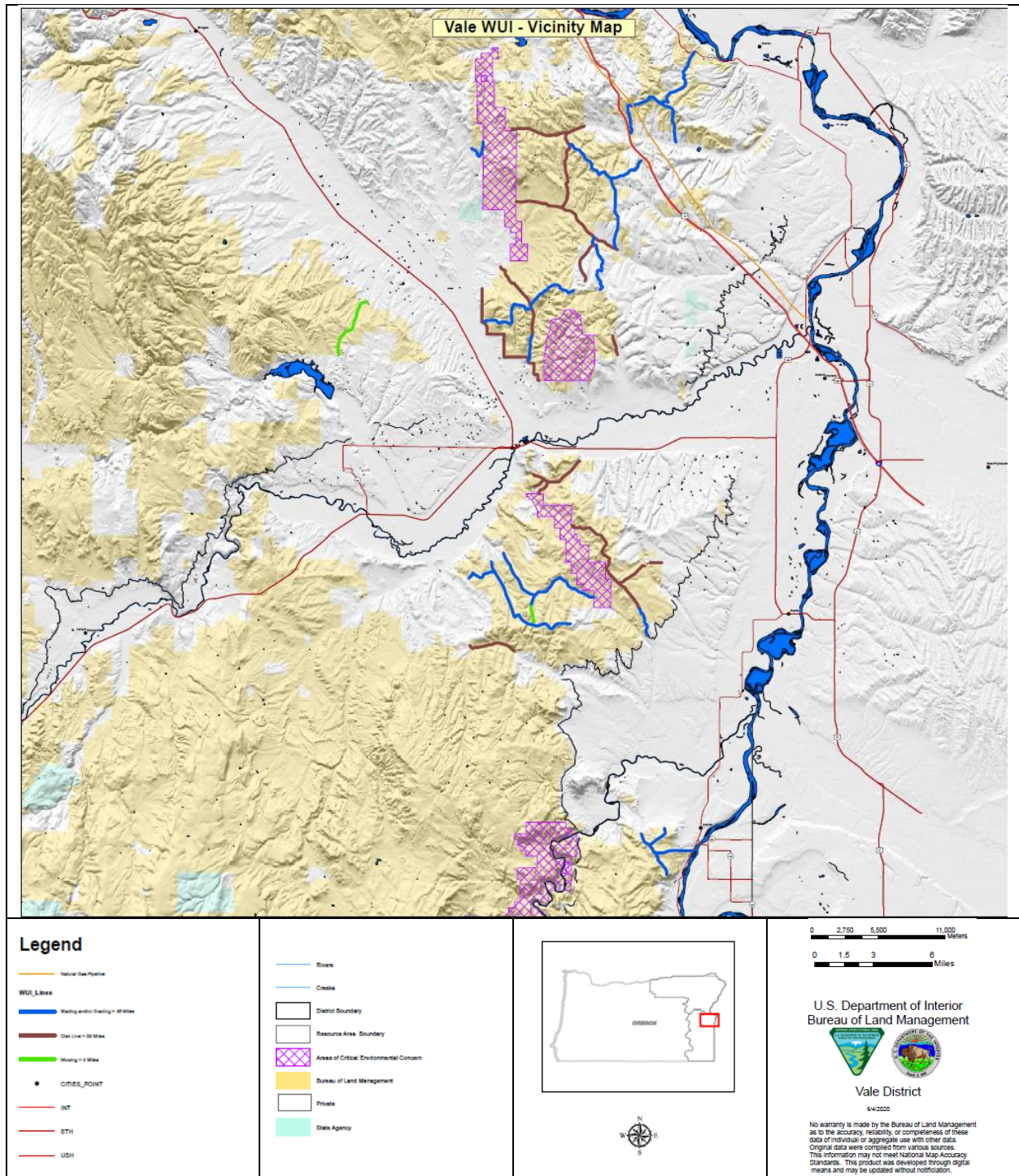


Figure 8-6) Vale WUI Vicinity Map.

8.2 MITIGATION ACTION ITEMS

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
1	Boat Check Station	Education	Ontario	Wildfire prevention messaging and boat trailer safety inspections by ODFW staff in congruence with invasive species checks.	BLM Community Assistance activity funding, ODFW	Lead: ODFW Support: BLM	On-going
2	Elementary School programs	Education	County-wide	Wildfire prevention and outdoor fire safety messaging and education with K-6 students with all schools in the County. Some schools are co-teaching efforts with the local Fire Districts.	BLM, local fire Authority Having Jurisdiction	Lead: BLM Support: Fire Districts	On-going
3	Local Special Events	Education	Ontario, Vale, Nyssa, Adrian	Wildfire education outreach at multiple public events throughout the year across the County (parades, fairs, rodeos, others)	BLM, Fire Districts	BLM and the Fire Districts	On-going
4	US 20/26 Billboard	Education	Ontario and Vale	Wildfire safety messaging on roadside billboard rental	BLM Community Assistance activity funding	Lead: BLM Support: Ontario and Vale Fire Districts	On-going
5	Community Education Support	Education	County-wide	Fire prevention materials (including signage), training aids, fire danger signs, and Firewise USA reference materials to support to multiple agencies, offices, local business, and non-profits within the County (ie: Fire Districts, County and City departments, ODOT, State Parks, ODFW, Bureau of Reclamation and Lake Owyhee cabin leases, RFPAs, Friends of the Owyhee, retail outlets, libraries)	BLM Community Assistance activity funding, OSFM	Lead: BLM Support: OSFM	On-going
6	Hunter Education	Education	Ontario and Vale	Wildfire prevention, outdoor fire safety, and fire-safe shooting with hunter education students	BLM Community Assistance activity funding	Lead: ODFW Support: BLM	On-going

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
7	Smoke Monitoring	Other - Engineering	Nyssa, Vale, Ontario, Arock, Jordan Valley	Air quality monitors for reading wildfire smoke levels for sensitive populations and provide data for OR OSHA requirements (<i>ask Brule Lehman</i>)	Owyhee Irrigation District (OID), BLM Community Assistance activity funding	BLM, Owyhee Irrigation District, Vale Fire and Ambulance, Jordan Valley Ambulance, Ontario Fire and Rescue, Arock School	On-going, more locations coming
8	BLM "Right of Way" fuels treatment projects	Mitigation	Various highway corridors in the county	Refer to the following document for more information about this project: <i>The Threat of Vehicle Caused Wildfire Ignitions in SE Oregon: A Proposal for Landscape-Level Cooperative Fuel Break Treatments</i> Details related to this project are not included in this table due to the scope of the project and the possibility that project details may be modified in the document named above.	Refer to the document named under "Project Description"	Refer to the document named under "Project Description"	Refer to the document named under "Project Description"
9	BLM Infrastructure Firewise USA	Mitigation	Birch Creek Ranch, Lake Owyhee Road, Chukar Park, and others	Fuels reduction, asset hardening, water source development, fire protection, and ignition management (engineering) at key recreation and administrative sites with economic, historical, cultural, and/or archeological significance and value.	BLM Community Assistance activity funding	BLM	On-going
10	Owyhee Irrigation Wildfire Risk Reduction	Mitigation and Education	Adrian, Nyssa, Vale, and Ontario	Road improvement and fuel breaks, utility line protection, establishing pump chance sites on the canal, herbicide applications to control invasives, and wildfire prevention and Firewise USA techniques education to water users and public.	BLM Community Assistance grant, and OID	BLM, OID	2029
11	McDermitt Airport fuels reduction	Mitigation	McDermitt	Reduce fuels (grass, brush) around McDermitt Airport. Fuel buffers should be created around the runway and be 50 to 100 feet wide. Additional buffers should be created around buildings and infrastructure as needed.	McDermitt Airport; BLM; Community Assistance activity funding	McDermitt Airport, BLM, Malheur County	2026; to be repeated as needed.

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
12	Electric utility infrastructure hardening	Mitigation	County-wide	Increase the resistance and resiliency of electrical systems to hazards, such as severe weather and wildfire, through the hardening of electrical infrastructure. In areas where risk is highest, power lines should be relocated underground, and other parts of the system should be protected as needed. Mountain top communication sites are one example of sites that are particularly vulnerable to storms and should be considered for improvements.	Grid Resilience Grant Program; Grid Resilience & Innovation Partnerships; Community Wildfire Defense Grants	Harney Electric Cooperative; Idaho Power	Complete by 2029
13	Roadside fuel treatments	Mitigation	County-wide	Conduct fuels reduction and maintenance work along county roads. This would require coordination between the Road Assessment Districts and county road master and the development of a fire plan with short- and long-term strategies to address wildfire risk along roadways (e.g. strategies could include the replanting of ROW's with more fire-resistant vegetation).	Oregon State Fire Marshal, Community Wildfire Defense Grants	Road Assessment Districts, County Road Department	Complete by 2029
14	Malheur County Wildfire Coalition	Planning; Capacity Building	County-wide	Examine the potential for a "Malheur County Wildfire Coalition." coordinated with the existing Malheur County Rangeland Coalition.	Federal, state, local	Multiple federal, state, and local	Ongoing
15	Oregon Trail Fire Prevention Cooperative	Education	County-wide	Resurrect the "Oregon Trail Fire Prevention Cooperative" (under the SRV Fire Chief's Association) and consider dedicated wildfire mitigation/prevention representatives or staffing. • Collaborative targeted prevention campaigns that address leading causes of wildfire performed jointly with multiple partners. • Coordinated and cooperative staffing of community special events across the County. • Resurrect the annual "Public Safety Fair", traditionally once held at the County Fair, to a new venue and date at Four Rivers Cultural Center. • Intterra contract (or similar software), tablets, home/ property hazard assessments and mapping (performed by Malheur County and Fire Districts through grant funding).	BLM, Fire Districts, SRV Fire Chief's Association, OSFM, EOWB	BLM, Fire Districts, SRV Fire Chief's Association, OSFM, RFPAs, Firewise USA Sites	Begin in 1-2 years and maintain annually

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
16	Update 2002 Dynamac Study	Planning	County-wide	Consider a new County-wide risk assessment, building off the old Dynamac study published in January 2002.	FEMA BLM	Malheur County, Fire Districts	Ongoing
17	Review of Debris Burning Regulatory Practices	Planning	County-wide	Develop an internet-based burn permit system, review County ordinances for debris burning (update if necessary), and perform enforcement. Check State smoke regulations for compliance.	State, County, BLM	ODF DEQ Malheur County Fire Districts	Ongoing
18	Right-of-way Hardening	Mitigation	County-wide	Expand right of way travel corridor hardening - road resurfacing/ grading and shoulder maintenance and widening (earth work and herbicides through Road Districts and ODOT). This project would likely be ongoing once implemented.	BLM, State	Road Districts and ODOT	Ongoing once implemented
19	Expansion of Firewise Sites	Mitigation	Areas that are not within a Fire District	Encourage communities to develop NFPA Firewise USA Site status. Focus on those areas NOT within a Fire District.	ODF, BLM, non-profit grants, OSFM	Malheur County, BLM, OSFM	Ongoing once implemented
20	Creation of New Fire Districts.	Capacity Building	County-wide	Examine the potential for new Fire Districts for Jordan Valley Rural / Arock/ Rome/ Juntura/ Harper/ Westfall/ Ironside or a "County Fire Department" model (with sub-stations) for under-protected areas.	State and County	Malheur County, OSFM, local governments	Jordan Valley city in 2026
21	Review Mutual Aid Agreements	Planning	County-wide	Ensure mutual aid agreements are in place in areas of the County that are under-protected (example: at the far southern end of the county). •	Malheur County	Malheur County, Fire Defense Chief	Discussions have begun as of 2026

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
22	Expand Rural Addressing Program	Mitigation	County-wide	Expand rural addressing program in Ontario Rural Fire District to County-wide effort.	BLM, FEMA, others	Malheur County, ASD, Fire Districts	Still in process
23	Fire District Boundary Signage	Education; Mitigation	County-wide	Add Fire District boundary signage.	Malheur County, local governments, and Fire Districts	Fire Districts, Sheriff's Office, OSFM	Ongoing
24	Bridge Signage and Improvements	Mitigation	County-wide	Inspections, weight ratings, signage, and repairs/upgrades on key bridges in the WUI. - Fix the Jonesborro bridge (Burns Paiute Tribe) to provide fire access south of Malheur River. - Canal bridges	Look into road/bridge grants	Malheur County, Road Districts, Burns Paiute Tribe, Irrigation Districts, Fire Districts	Ongoing
25	Review of Building Codes	Planning	County-wide	Examine and improve WUI building codes, inspections. Consider new WUI and home hardening code adoption.	County budget	Malheur County Building Department, local governments, and Fire Districts	Ongoing
26	Construction Impact Fees	Capacity Building	County-wide	Examine the use of impact fees for new residential and commercial construction. These funds can help local fire districts (and potentially fund a position, like a "County Fire Coordinator" position).	Malheur County	Malheur County, local governments, Fire Districts	Ongoing
27	Fuels Treatments: WUI	Mitigation	County-wide	Treat annual invasive grasses and high fuel loads in the WUI across jurisdictional lines (prescribed fire/ herbicide/ mechanical) including fenceline and roadway tumbleweed removal.	OSFM, BLM, ODF, non-profits and local organizations	Malheur County, Fire Districts, RFPAs, BLM	Ongoing, annually

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
28	Fuels Treatments: Expansion of Fuel Breaks	Mitigation	County-wide	Fuel breaks across private lands to provide connectivity to established BLM fuel breaks. This project requires outreach between the local agency (such as the RFPAs) and landowners with cooperation with BLM.	OSFM, BLM, ODF, non-profits and local organizations	OSFM, BLM, ODF, non-profits and local organizations	Ongoing once implemented
29	Fuels Treatments: Assistance for Property Owners	Mitigation	County-wide	Mechanical removal of hazardous fuels on private lands. - Rent equipment (chipper/ brush hog) for home/ property owner cleanup and mitigation. - Free yard waste removal day (pay for truck and staff to haul). - Develop a program to assist elderly and disabled landowners.	OSFM, BLM, NRCS, Malheur County, other federal and state grants	OSFM, TVCC, BLM Local FDs, Youth Corps, Team Rubicon, Malheur County ESD and building department, new Firewise USA Sites, local non-profits	Ongoing, annually
30	Rural emergency Water Source Improvements	Capacity Building	County-wide	Rural emergency water source improvements/ additions (pump chance sites). Like the on-going efforts and projects by Owyhee Irrigation, Ontario Rural Fire District, and the BLM.	Irrigation Districts, BLM, local landowners	Irrigation Districts, Fire Districts, local landowners	Ongoing
31	Irrigation, Road, and Agriculture Training	Capacity Building	County-wide	Training for irrigation, road, and ag districts in the burn permitting process and use of prescribed fire.	BLM	Owyhee Irrigation District, BLM, Malheur County, Fire Districts	2029
32	Firefighter Recruitment	Capacity Building	County-wide	Recruit more volunteer firefighters and paid firefighters for the Fire Districts.	FEMA, OSFM	Fire Districts, RFPAs	Ongoing
33	Facilities Improvements	Capacity Building	County-wide	Identify any needed repairs or changes (e.g., expansion) to fire station facilities to meet current demands.	Normal ops budgets, federal grants	Fire Districts	Ongoing

Project I.D.	Project Name	Type	Project Location	Project Description	Sources of Funding	Involved Organizations	Projected Completion Date
34	RFPA Risk Assessments	Capacity Building	County wide RFPA areas	Partner with ODF and BLM to conduct POD assessments and evaluate overall suppression capabilities/capacity and PCLs.	AFG program	RFPAs, BLM, ODF	Ongoing
35	ESD grant-led home hardening	Mitigation	Identified CWPP WUI areas	Using wildfire resiliency home hardening to build capacity in the trades.	EOWB	ESD, Malheur County building department, Fire Districts, BLM	Started in 2026
36	Treasure Valley CC youth wildfire education and mitigation partnership	Mitigation	Ontario, Adrian, Nyssa, Vale	1. Outreach to local high school students to educate on wildfire suppression and give basic wildland firefighter training. 2. Hands on training and experience in WUI mitigation strategies.	TVCC	Lead: TVCC Local schools BLM	Ongoing Annual
37	Continued project development via community input	Planning	County wide	Bring the action item table to public outreach events, such as county fair, to solicit feedback on potential projects and future mitigation strategy.	Operations budgets	OSFM County EM Local FDs BLM	Ongoing annual

9 APPENDIX

9.1 ACRONYMS AND GLOSSARY

9.1.1 Acronyms

BLM – Bureau of Land Management

CAR – communities at risk

CWPP – Community Wildfire Protection Plan

DSL – Oregon Division of State Lands

EA – Environmental Assessment

EIS – Environmental Impact Statement

FEMA – Federal Emergency Management Agency

HFRA – Healthy Forests Restoration Act

NEPA – National Environment Protection Act

NEO – Northeast Oregon District (of Oregon Department of Forestry)

NFP – National Fire Plan

ODF – Oregon Department of Forestry

ODOT – Oregon Department of Transportation

ORS – Oregon Revised Statute

OSFM – Office of State Fire Marshall

RFPD – Rural Fire Protection District

RPA – Rangeland Protection Association

SB – Senate Bill (Oregon Legislature)

SFM – State Fire Marshall (more commonly Office of State Fire Marshall)

USFS – US Forest Service

WUI – Wildland-Urban Interface

WHZ – Wildfire Hazard Zone

9.1.2 Glossary

Conflagration – in the context of this document, this means Governor-declared fires with an imminent threat to life or structures that have exhausted local and mutual aid resources.

Conflagration Act – state legal authority established as a civil defense measure to mobilize structural fire suppression resources for massive urban fires. It was first used in 1951 to coordinate aid to an explosion and fire in downtown Roseburg. The Act was not invoked again until 1972, when a wildland fire in Yamhill County threatened homes in what is now known as the wildland-urban interface. It must be authorized by the Governor. The Act includes authorization for OSFM to assign firefighting forces and equipment beyond mutual aid agreements. It also designates reimbursement for aid to those departments participating.

Driveway – the primary, privately owned vehicle access road that serves a dwelling, which is controlled by the owner of the dwelling, and which is longer than 150 feet.

Dwelling – a structure, or a part of the structure, that is used as a home, as a residence, or as a sleeping place by one or more people who maintain household in the structure.

Fire-resistant roofing – roofing material that has been installed and is maintained to the specifications of the manufacturer, and which is rated by Underwriter’s Laboratory as Class A, Class B, Class C, or is equivalent thereto; or is metal.

Forestland – any woodland, brushland, timberland, grazing land or clearing that, during any time of the year, contains enough forest growth, slashing or vegetation to constitute, in judgment of the state forester, a fire hazard, regardless of how the land is zoned or taxed.

Fuel break – a natural or human-made area immediately adjacent to a structure or to a driveway, where material capacity of allowing a wildfire to spread does not exist or has been cleared, modified, or treated to significantly reduce the rate of spread and the intensity of an advancing wildfire; to create an area in which fire suppression operations may more safely occur.

Homeowner’s association – a legal nonprofit corporation that manages a community of homes or residential properties.

Included rural lands – lands that meet the definition “rural” but which have been classified as “suburban”.

Ladder fuel – branches, leaves, needles, and other combustible vegetation that may allow a wildfire to spread from lower growing vegetation to higher growing vegetation.

National Fire Plan – a federal program that helps manage the impact of wildfire on communities. It has five main components: firefighting, rehabilitation and restoration, hazardous fuel reduction, community assistance, and accountability. The state foresters

have agreed upon a process for completing an assessment in 2003-04 for evaluating communities at risk to better prioritize funding of National Fire Plan projects.

NEO District – ODF district in Northeast Oregon comprised of four units: Union, Wallowa, Baker, and Pendleton. NEO District headquarters are located in La Grande. The private lands in the very northern portion of Malheur County is contained within the forest protection district of Northeast Oregon. Non-fire-resistant roofing – roofing material that is not resistant including, but not limited to, cedar shakes.

Road – a road over which the public has a right of use.

Rural – a geographic area that has not been classified by a committee as suburban or urban and shall include:

- Lands zoned primarily for farm or forestry uses;
- Lands which have an average tax lot size of 10 acres or larger;
- Lands not zoned to allow a concentration of structures;
- Lands that do not contain a concentration of structures.

Safety zone – an area that is substantially free of flammable materials, and which can be used as a refuge to protect people from an advancing wildfire.

Standards – the actions, efforts, or measures which owners of suburban and urban lands shall take on their property, prior to a wildfire occurrence which originates on the property.

Statistical Fires – ODF fires typically referred to as „stat“ fires. They are fires that ignited on State protected land.

Structure – a permanently sited building, a manufactured home, or a mobile home that is either a dwelling or an access building, which occupies at least 500 square feet of ground space, and which has at least one side that is fully covered.

Structural fire protection – the protection of structures by established municipal fire departments and rural fire protection districts with specific equipment and training.

Structural Ignitability – a term that relates to the cause of a home igniting during a wildfire. Examples are ratings given to the building materials used for the home and amount of combustible materials around the home.

Structural Vulnerability – a term that relates factors contributing to how and why a home is vulnerable to wildfire, including but not limited to, access to the home, ladder fuels and vegetation within the landscape of a home, and whether or not fire protection is available.

Suburban – a geographic area which includes one or more of the following:

- Lands where a concentration of structures exists;
- Lands on which current zoning allows a concentration of structures; or

- Included rural lands.

Urban – a geographic area that includes one or more of the following:

- Lands within a city limit; or
- Lands within an urban growth boundary.

Wildfire – an uncontrolled fire that is burning on forest and which is damaging, or is threatening to damage, forest resources or structures.

Wildfire Hazard Zone – the portion of a local government jurisdiction that has been determined to be at risk of a catastrophic wildfire. The purpose of such a designation is to define those areas where buildings need to be made more survivable from fires spreading from adjacent wildlands. The WHZ process was established by the 1993 Oregon Legislature. Participation by local governments is voluntary.

Wildland-Urban Interface (a.k.a. Wildland Interface, Forestland-Urban Interface, Interface) – an area where structures are adjacent to or are intermingled with natural vegetative fuels which is prone to the occurrence of wildland fires.

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