



Malheur County Community Wildfire Protection Plan

WORKING DOCUMENT – February 18, 2009

*Valuing the protection of Wildland-Urban
Interface Areas and associated Communities-at-
Risk across Malheur County*

Signature Page

The contents of this plan have been agreed upon by the Malheur County Court, Oregon Department of Forestry, and the structural firefighting community of Malheur County as noted by the signatures below. This plan is a working document that will be revised and updated annually by the originators of the plan. The contents, vision, mission, goals, and objectives of this plan will become a part of any operation plan of the agencies represented below:



Dan Joyce, County Judge
Malheur County Court

2-18-2009

Date



Louis Wettstein, County Commissioner
Malheur County

2-18-2009

Date



Jim Nakano, County Commissioner
Malheur County

2-18-2009

Date



John Buckman, District Forester,
Northeast Oregon District,
Representative for Oregon Department of Forestry

2-18-2009

Date



Al Highbotham, Fire Defense Board Chief
Malheur County Fire Defense Board
Representative for Structural Fire Response

2-18-09

Date

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I. Introduction

Wildland-Urban Interface Loss in Oregon¹

Wildland fires are a common and widespread natural hazard in Oregon; the state has a long and extensive history of wildfire. Significant portions of Oregon's wildland and areas adjacent to rural communities are dominated by ecosystems dependent upon fire for their health and survival, especially in central and eastern Oregon.

Oregon has in excess of 41 million acres (more than 64,000 square miles) of forest and rangeland that are susceptible to wildfire. In addition, significant agricultural areas of the Willamette Valley, north central, and northeastern Oregon grow crops, such as wheat, and raise livestock on rangelands, that are prone to wildfire damage. Communities are also at risk. According to a listing in the 2005 Statewide Communities-at-Risk Register², hundreds of Oregon communities are at risk of damage from wildfire. In Malheur County, nearly 2 million acres of wildland-urban interface (WUI) exists. Within those areas, 27 communities would be directly threatened or affected by a large wildfire event.

The majority of wildfires occur between June and October of each year. However, wildfires can occur at other times of the year, when weather and fuel conditions combine to allow ignition and spread. In 2003, fire statistics statewide showed seventy percent of Oregon's wildland fires resulted from human activity. The remaining thirty percent resulted from lightning, occurring most frequently in eastern and southern Oregon. In Malheur County, averages for fire cause vary from that of state averages: lightning accounts for 57% of the fire starts and 42% of the fire starts are attributed to human influence (the remaining 1% of fire starts are of unknown origin).³

The financial, social, and economic costs of wildfires demonstrate the need to reduce their impact on lives and property, as well as the short and long-term economic and environmental consequences of large-scale fires. Cost savings can be realized through preparedness and risk reduction, including a coordinated effort of planning for fire protection and implementing preparedness activities among local, state, and federal agencies, the private sector, and community

¹ State of Oregon. *Emergency Management Plan, Natural Hazards Mitigation Plan, Fire Chapter*, December 2003.

² Statewide CAR Listing. October 2005.

³ Malheur County Fire Statistics include information from the BLM and some structural fire agency data. Analysis years are 1997-2007.

organizations. Individual property owners have a major role to play in this coordinated effort, especially in WUI areas.

The *WUI* is the area or zone where structures and other human development meet or intermingle with wildland or vegetative fuels. As more people have moved into WUI areas, whether for lifestyle or economic reasons, the number of large wildfires affecting homes has escalated dramatically. Many in the population migrating to rural Oregon from urban areas took with them an expectation of structural fire protection similar to high-density populated areas they were leaving. 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 within areas with little or no structural or wildland fire protection (considered unprotected land). Fires that occur within unprotected lands become the responsibility of Malheur County; coordination is handled through the Emergency Management office and the Oregon State Fire Marshall's County Fire Chief to determine appropriate response. To improve fire response in unprotected areas of Malheur County, many ranch owners have banded together to form *Rangeland Protection Associations* (RPA). In Malheur County, four associations have formed – Vale RPA, Juntura RPA, Jordan Valley RPA, and the first association formed, Ironside RPA. 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. Overall strategies are listed in the Mitigation Action Plan – Section VI. Specific strategies for each WUI area can be found in the Appendix of this document.

Recent fire seasons bring the WUI problem to the forefront. Fuels that are outside of historical conditions is a major, continuing problem that has received national, regional, statewide, and local attention. Work is underway to reduce fuels in WUI areas by way of community involvement and funding from *National Fire Plan (NFP)*.⁴ NFP goals are listed below and the essence of NFP is captured in this document:

- Ensure sufficient firefighting resources for the future;
- Rehabilitate and restore fire-damaged and fire-adaptive ecosystems;
- Reduce fuels in forests and rangelands at risk, especially near communities; and,

⁴ <http://www.forestsandrangelands.gov>

- Work with local residents to reduce fire risk and improve fire protection.

Community Assistance grants and other grant opportunities are available through NFP to aid in achieving these goals. The goals aim high and represent a huge amount of work, with their ultimate success depending on concerned individuals, agencies, and organizations joining forces. No agency or group working alone can achieve all of the goals laid out in NFP. It takes a collaborative effort to be successful.⁵

Preparing a Community Wildfire Protection Plan (CWPP)⁶

Both the NFP and the *"Ten-Year Comprehensive Strategy for Reducing Wildland Fire Risks to Communities and the Environment"* place a priority on working collaboratively within communities in the WUI to reduce their risk from large-scale wildfire. The incentive for communities to engage in comprehensive forest planning and prioritization was given new momentum with the enactment of the *Healthy Forests Restoration Act (HFRA)*⁷ in 2003.

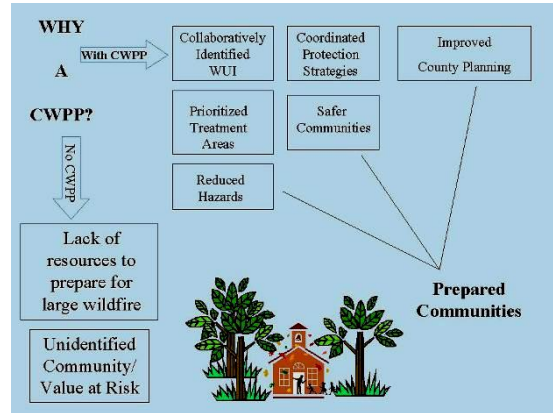


Figure 1-Graphic by Angie Johnson, Oregon Department of Forestry

The language in HFRA provides maximum flexibility for communities to determine the substance and detail of their plans and the procedures they used to develop them. HFRA emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuels reduction projects and places a priority on those treatment areas identified in the local fire plan document.

In addition to the emphasis of collaboration when preparing a CWPP, there is also emphasis on collaboration when developing mitigation strategies. Counties utilize the same type of planning process, including development of mitigation strategies, when developing their Natural Hazard Mitigation Plans (NHMP), as directed by FEMA. The Malheur CWPP will be the Fire Chapter in the Malheur County NHMP.

⁵ <http://ifsp.fortlewis.edu>

⁶ <http://www.communitiescommittee.org/pdfs/cwpphandbook.pdf>

⁷ <http://www.whitehouse.gov/infocus/healthyforests/>

When preparing the Malheur County CWPP, the committee followed direction as described in the CWPP Handbook (see Footnote 6 on the previous page). In addition, the components of HFRA were also considered. The minimum requirements that must be met when preparing a CWPP are:

- 1) **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
- 2) **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
- 3) **Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

HFRA also requires that three entities must mutually agree to the final contents of the CWPP –

- The applicable local government (i.e., counties or cities)
- The local fire department(s)
- The state entity responsible for forest management (Oregon Department of Forestry)

Agreeing to the contents of the CWPP also obligates the three parties to a collaborative process when implementing the mitigation strategies identified in this plan.

Overview of this Plan and its Development, and Compliance

The Malheur County Community Wildfire Protection Plan is the result of analysis, professional cooperation and collaboration, assessments of wildfire risks and other factors considered with the intent to reduce the potential for wildfires that threaten people, structures, infrastructure, and values in Malheur County.

The core committee responsible for executing this project included:

Angie Johnson, Oregon Department of Forestry (ODF)	<i>Facilitator</i>
Jon Beal, Malheur County Planning Department	Core Member
Randy Eyre, Vale Bureau of Land Management, Planning	Core Member
Gordon Foster, ODF Rangeland Protection Coordinator	Core Member
Todd Hesse, Vale Rural Fire Protection District Fire Chief	Core Member
Lt. Ron Hunsucker, Malheur County Emergency Services	Core Member
Michelle Kooch, Malheur County Geographic Information	Core Member
Bill Lawrence, City of Vale, Mayor	Core Member
Terry Mairs, City of Ontario and Malheur County Fire Chief	Core Member
Sean McEldery, Vale Bureau of Land Management, Fuels	Core Member
Nancy Pustis, Oregon Division of State Lands	Core Member
Jason Simmons, Vale Bureau of Land Management, Fire	Core Member
Richard Smith, Oregon State Fire Marshall's Office	Core Member

Resources members that served as advisory oversight to the core committee were:

Sheriff Andrew Bentz, Malheur County Sherriff's Office
Linda Bentz, Juntura Rangeland Protection Association
Kim Mason, Malheur County Court Liaison
Tom Morcom, Vale Bureau of Land Management, Fire Prevention
Adele Payden, City of Jordan Valley Administration
Jake Roe, City of Jordan Valley, Mayor
Undersheriff Brian Wolfe, Malheur County Sherriff's Office
Al Higinbotham (Replaced Terry Mairs in December 2008), Ontario Fire Chief and Malheur County Fire Defense Board Chief

This CWPP has been prepared in compliance with the National Fire Plan, the 10-year Comprehensive Strategy, the Malheur County Natural Hazard Mitigation Plan, and Healthy Forest Restoration Act.

This plan is endorsed by the Malheur County Court, Oregon Department of Forestry, and the Malheur County structural fire community. These representatives mutually agree to the final contents of the plan. This plan will not be legally binding in any way; its role is to be viewed as a working document that serves as a planning and implementation tool for fire and land managers and citizens of Malheur County (see the Signature Page on page 2 of this plan).

II. Malheur County Profile and Fire Environment⁸

Malheur County is a county located in the southeast corner of the U.S. state of Oregon. The county was named for Malheur River, which flows through it. As of 2000, the population is 31,615. Its county seat is Vale. Ontario is the county's largest city.

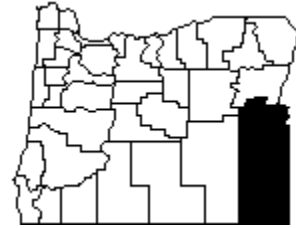


Figure 2 - Malheur County in Oregon

History

Malheur County was created 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.

Economy

The county is 94% rangeland, with the Bureau of Land Management (BLM) controlling 72% of the land. Irrigated fields in the county's northeast corner, known as Western Treasure Valley, are the center of intensive and diversified farming. Malheur County's economy also depends on tourism, farming, and ranching.

Because of its economic relationship with Idaho, most of Malheur county observes Mountain Time, making it the only county in Oregon that (mostly) does not follow Pacific Time. The largely unpopulated southern portion of the county, near McDermitt, observes Pacific Time. Therefore, Malheur is the only county in the United States that legally observes two different time zones.

Malheur County is the poorest county in Oregon with over 18.3% of their residents living in poverty.

Geography

According to the U.S. Census Bureau, the county has a total area of 25,719 km² (9,930 mi²). 25,607 km² (9,887 mi²) of it is land and 111 km² (43 mi²) of it (0.43%) is water.

⁸ <http://www.answers.com/topic/malheur-county-oregon>

Demographics

As of the census of 2000, there were 31,615 people, 10,221 households, and 7,348 families residing in the county. The population density was 1/km² (3/mi²). There were 11,233 housing units at an average density of 0/km² (1/mi²). The racial makeup of the county was 75.78% White, 1.22% Black or African American, 1.02% Native American, 1.96% Asian, 0.08% Pacific Islander, 17.38% from other races, and 2.56% from two or more races. 25.62% of the population were Hispanic or Latino of any race. 79.4% spoke English and 19.4% Spanish as their first language.

There were 10,221 households out of which 36.20% had children under the age of 18 living with them, 57.30% were married couples living together, 10.40% had a female householder with no husband present, and 28.10% were non-families. 23.70% of all households were made up of individuals and 12.00% had someone living alone who was 65 years of age or older. The average household size was 2.77 and the average family size was 3.28.

In the county, the population was spread out with 27.60% under the age of 18, 10.60% from 18 to 24, 27.20% from 25 to 44, 21.00% from 45 to 64, and 13.70% who were 65 years of age or older. The median age was 34 years. For every 100 females there were 116.00 males. For every 100 females age 18 and over, there were 121.20 males.

The median income for a household in the county was \$30,241, and the median income for a family was \$35,672. Males had a median income of \$25,489 versus \$21,764 for females. The per capita income for the county was \$13,895. About 14.60% of families and 18.60% of the population were below the poverty line, including 25.80% of those under age 18 and 11.60% of those age 65 or over.

Communities

Incorporated cities

- *Adrian* - near the confluence of the Snake River and the Owyhee River. The population was 147 at the 2000 census.
- *Jordan Valley* - was named after Jordan Creek, a tributary of Owyhee River, which runs through the town. The population was 239 at the 2000 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 3,163 at the 2000 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 2000 census, the city population was 10,985.
- *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 2000 census, the city had a total population of 1,976.



Figure 3 - Main Street, Ontario in the 1920s.

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 "juncture", 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.



Figure 4 - Pillars of Rome, near Rome (Oregon Blue Book)

Fire Environment⁹

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. Wildfire is defined as an uncontrollable burning of forest, brush, or grassland. Fire has always been a part of high desert Western ecosystems and can have devastating effects. Eastern Oregon has a lengthy history of wildfire in both wildland and in wildland-urban interface (WUI) areas. In contrast to other parts of this region, Malheur County is notable for a relative lack of forested land and the predominance of high desert grasslands. Both the forests and grasslands of the County are highly susceptible to wildfire and many of the county's cities and unincorporated communities, in addition to rangelands and agricultural lands, are vulnerable to its effects. Wildfires are an annual occurrence in the county and have varied in size from under 10 acres to over 100,000 acres.

As mentioned above, Malheur County wildlands are predominantly high desert sagebrush and grassland environments. The County's only forested area is located in the northwestern corner of the county near the unincorporated community of Ironside, in addition to scattered small patches in the southern portion of the County. The hilly or mountainous topography of much of the County also exacerbates wildfire hazards: these areas can cause a wildfire to spread rapidly and burn larger areas in a shorter period of time, especially as fires migrate uphill. Wildfire has been known to move at speeds of 30 mph or higher on grasslands in the County.

Communities in the county located in a wildland-urban interface (WUI) are at increased risk to wildfire hazards. The WUI occurs where man-made structures meet or intermix with wildland vegetation. In 2002, the Vale BLM office completed "Communities-at-Risk" (CAR) wildland fire risk assessments for several WUI areas in the county: McDermitt, Jordan Valley, Rome, Arock, Adrian, Vale, Ontario Heights, and Ontario Slope. These CAR reports contain documentation on each community's risk for wildfire and list proposed mitigation actions as determined by BLM, its contractors, and the local communities. The reports will be referenced throughout this document.

Conditions Contributing to Wildfires

Ignition of a wildfire may occur naturally from lightning or from human causes such as debris burns, arson, careless smoking, and recreational activities or

⁹ This section includes specific information taken from the county's Natural Hazard Mitigation Plan.

from an industrial accident. Once started, four main conditions affect the fire's intensity and behavior: fuel load and distribution (how much flammable plant material is present and what type it is), topography, weather, and development.

Fuel is the material that feeds a fire. Fuel is classified by volume and type. Oregon is prone to wildfires due to its prevalent conifer, brush and rangeland fuel types; rangeland and brush dominate in Malheur County.

Topography influences the movement of air and directs a fire's course. Slope and elevation are key factors in fire behavior.

Weather is the most variable factor affecting wildfire behavior. High risk areas in Oregon, like Malheur County, share a hot, dry season in late summer and early fall with high temperatures and low humidity.

The increase in residential *development* in interface areas has resulted in greater wildfire risk. Fire can sweep through vegetation that is adjacent to a combustible home, and some rural parts of Malheur County do not have fire protection services for privately owned structures.

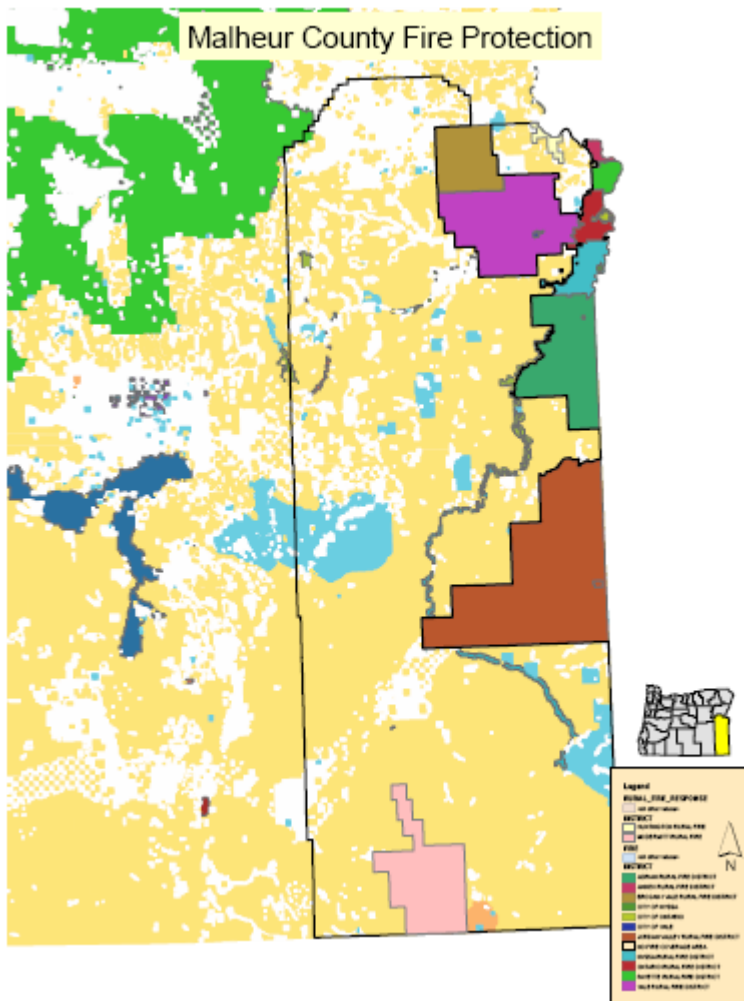
Impacts

The ecosystems of most forest and wildlands depend upon fire to maintain various functions. These benefits can include, depending upon location and other circumstances, reduced fuel load, disposal of slash and thinned tree stands, increased forage plant production, and improved wildlife habitats, hydrological processes and aesthetic environments. The effects of fire on ecosystem resources can include damages, benefits, or some combination of both. Despite these potential benefits, fire has historically been suppressed for years because of its effects on rangelands, recreation areas, agricultural operations, and the obvious significant threat to property and human life. The effects of a wildfire on the built environment, particularly in the face of a major wildfire event, can be devastating to people, homes, businesses and communities.

In Malheur County, where the majority of BLM land is leased for ranching operations, large wildfires can have significant economic impacts on ranchers' stock and range allotments, as burned land is unfit for grazing use for several years after a fire.

Fire History

Fire protection is provided across the county in the form of structural or wildland fire protection. Structural fire protection is provided by cities or rural entities. Wildland fire protection is provided by private citizens that form a rangeland fire protection association or BLM. ODF offers minimal fire protection in the county, primarily concentrated in the northern part of the county where private timberland exists. It is up to homeowners and landowners to ultimately provide their own fire protection by following fire prevention methods outlined in Section III of this plan. It is also important to realize that wildland fire protection does not get you structural fire protections. Wildland agencies or rangeland associations are not equipped to put out house fires.



Because a large share of the county includes land managed and owned by BLM, fire data exists for their lands only. Unfortunately, the statistics for fires within rural and municipal fire protection districts (and fires in rangeland protection association areas) were not captured in a format that could be utilized in GIS¹⁰ analysis. Any private land outside a protection district is considered unprotected.

Fire cause across the county is largely associated with fires started by lightning. Human causes are

Figure 5 – Structural Fire Protection in Malheur County mostly associated with abandoned

¹⁰ Geographic Information System – data for fire statistics, vegetation, topography, and weather was analyzed using GIS software, ArcGIS (an ESRI product).

campfires, debris burning, or fires started along the interstate and highways (faulty vehicle equipment, cigarettes tossed out of windows of vehicles, etc.).

Many significant large fires have occurred across Malheur County, some resulting in conflagration declaration. The Conflagration Act is a state legal authority established as a civil defense measure to mobilize structural fire suppression resources for massive urban fires. It must be authorized by the Governor; in order to use the Act, a wildfire must imminently threaten life or structures and local or mutual aid suppression resources must be exhausted. The Act includes authorization for Oregon State Fire Marshall to assign firefighting forces and equipment beyond mutual aid agreements.¹¹

Causes of fires recording by BLM for a ten-year history (1997-2007) show that 57% of the 640 starts are natural (lightning starts) and 42% of the starts are associated with human activity. Six of the starts have fall in the "unknown" category (1%).

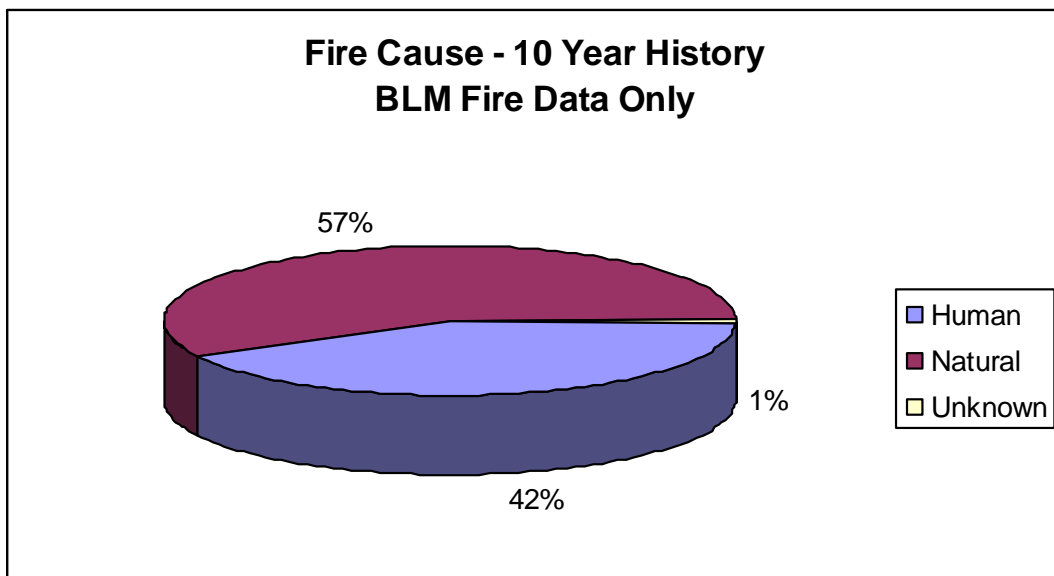


Figure 6 - Fire Cause, BLM Data (1997-2007)

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. A map on the next page shows some of the significant fire perimeters of fires that occurred over the last ten years and were larger than 5,000 acres. Below is a table

¹¹ State of Oregon Emergency Management Plan, Natural Hazards Mitigation Fire Chapter, December 2003.

showing a breakdown of fire size classes and the number of fires associated with each size class.

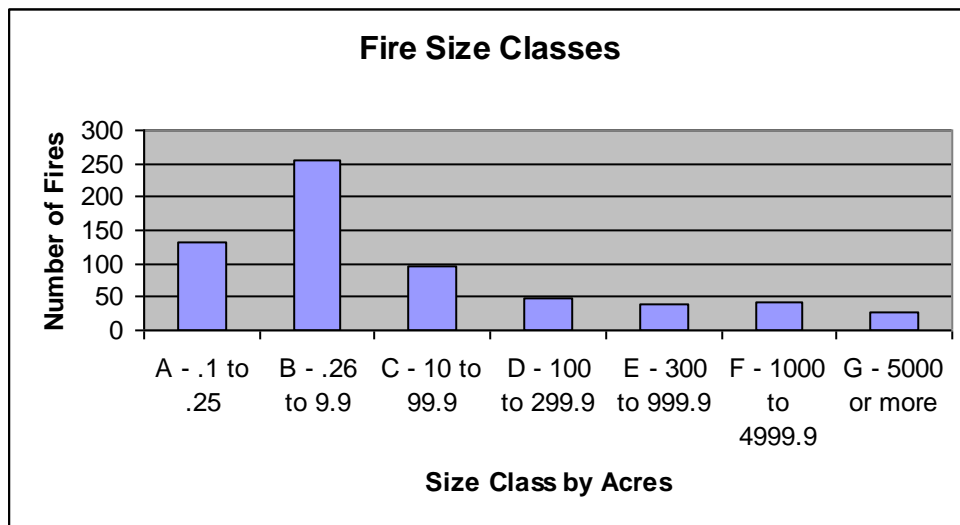
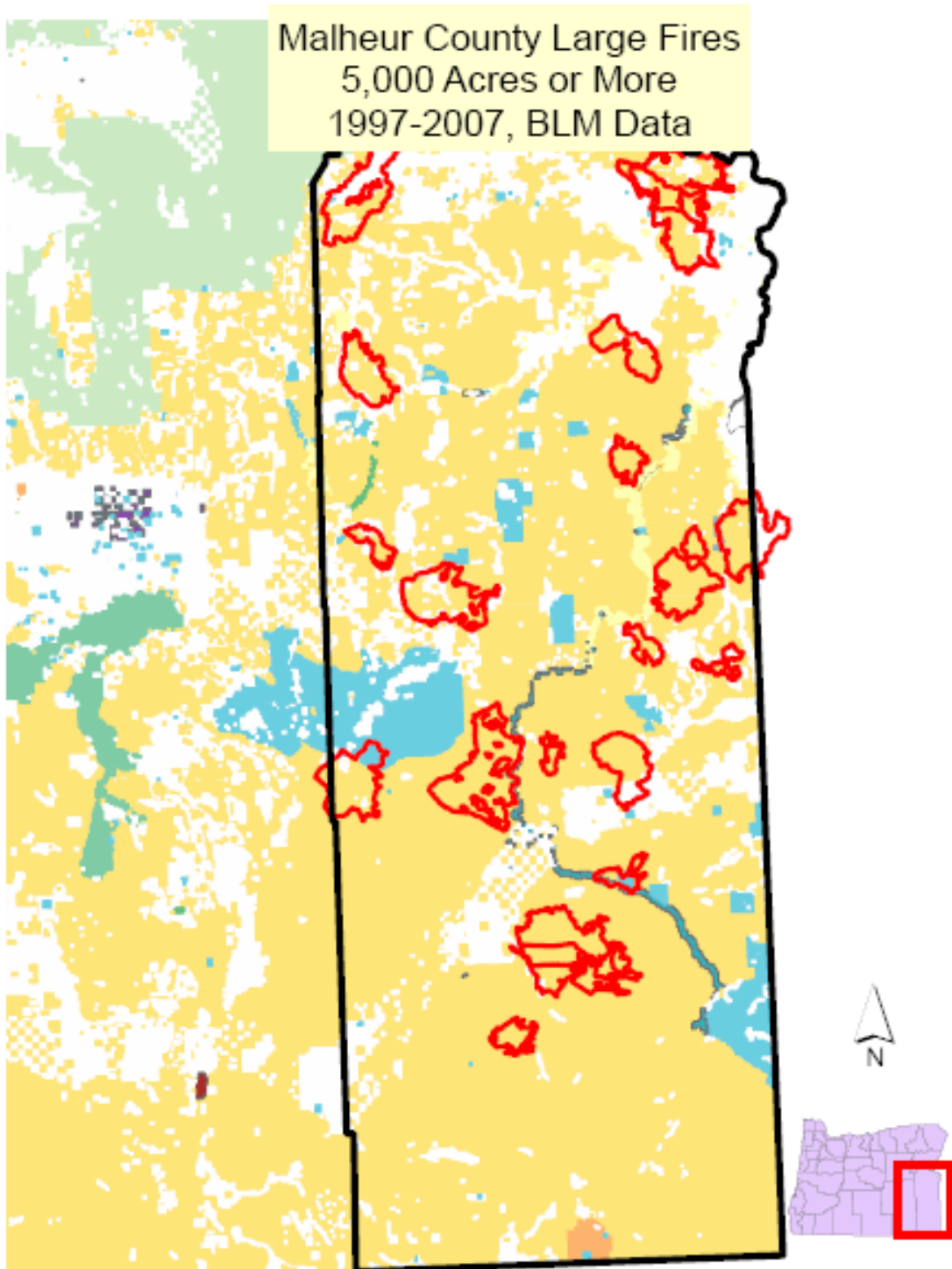


Figure 7 - Number of fires by Size Class, BLM data only

Figure 8 - Large Fires, 5000 acres or more, BLM



III. Community Participation, Outreach and Education/Prevention

CWPP Public Meetings and Questionnaire Results

The CWPP relies on input from citizens and communities about what they perceive to be most at risk from a wildfire event and what they value most about their surroundings. A series of five public meetings were held across Malheur County during February and June 2008. The purpose was two-fold: first, to inform interested citizens of the planning effort covering the WUI areas of the County, and second, to gather information from the local knowledge base about the risks of wildfire events specific to their communities. These meetings were helpful in identifying the values and resources that the communities and residents felt were most at risk and in need of protection from wildfire.

Information about the CWPP project and upcoming meetings was distributed across the region. An informational brochure was created providing background and local project information; a public meeting flyer was designed listing dates and locations. Over 150 brochures and meeting notices were distributed to local agencies, businesses, and community gathering places such as grocery stores, hardware stores, city halls, and post offices. Information was also posted on the ODF website.

Each public meeting included a PowerPoint presentation followed by discussion and a question and answer session. Various members of the Steering Committee attended each meeting, and overall, 15 private citizens participated in the meetings.

Meetings and outreach that took place across the county:

- Dynamac study contracted by BLM in 2002 to assess wildfire hazard across the county.
- Two public meetings in February 2008 (Vale and Jordan Valley)
- Two public meetings in June 2008 (Vale and Jordan Valley)
- One "virtual" meeting with Juntura Rangeland Protection Association members
- Two presentations to Malheur County Court
- Survey completed by structural fire district chiefs
- Questionnaires voluntarily submitted by private citizens
- Website development -
<http://www.odf.state.or.us/areas/eastern/northeast/malheurco/malheurco/cwpp.htm>

Common themes presented themselves in the questionnaires returned. It was obvious that many citizens do not see themselves at a tremendous risk to large wildfire. However, those that have been impacted in the past by the many large rangeland fires that take place across Malheur County were more than interested in improving protection from wildfire. Those that did respond to the questionnaires identified many values at risk as well, including grazing opportunities and water quality. Other values at risk identified during public discussions and results from the questionnaire are –

Homes	Rangeland Health
Hunting/Fishing	Businesses/Schools
Livestock	Way of Life
Transportation Corridors	Wildlife Habitat
Life	Communication Sites
Power Lines	Other Infrastructure
Hay Loss	Farm Buildings
Neighborhood/Community	Airport

Structural fire chiefs that responded to their questionnaire identified many issues that impact response time during a wildfire event. Due to the size of many districts in Malheur County, just getting to a home in a timely manner impacts how fire departments can best deliver service. Other issues raised related to improving structural fire response are –

- House identifies in poor locations or non-existent
- Many ditches in the county; access across limited – long turn-around time if you need to get water
- Fuel loading along critical road systems limits access in the event of a fire
- Limited water supply
- Structural fire departments exist for incorporated cities; some rural structural fire districts
- Misunderstanding among citizens – any fire truck leads them to believe that agency responding can attend to a structure fire.
- Remote, scattered locations of communities – no fire protection available or very limited wildland fire protection.
- Volunteers for the Rural Fire Protection Districts are desperately needed.

Fire Prevention

Living with Fire

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 into account the

topography and vegetation that surrounds it. The newspaper is available locally through ODF or on-line at <http://pnwfireprevention.com/prevention/living>.

Farm and Ranch Fire Safety

This prevention tool was developed by the Rangeland Protection Association, BLM, and Oregon Department of Forestry. This tool was distributed to cities, the county planning department, and fire districts for use in prevention programs. A copy of the information can be found on the Malheur County CWPP website - <http://www.odf.state.or.us/areas/eastern/northeast/malheurco/malheurcocwpp.htm>. Or, you may refer to the copy in the Appendices of this plan.



A growing number of Oregonians live in remote areas where fire response may be miles away or may not exist at all.

What can you do to reduce the risk of fire on your farm or ranch?

Redmond has developed a pamphlet suggesting specific types of vegetation that may reduce wildfire risk around the home. Most people landscape their property with aesthetics in mind, not thinking about whether a plant or shrub material is flammable and could actually increase the risk around their home. This brochure describes the different plant materials that homeowners can use for landscaping that will complement their home while

Firewise

This is a program developed by the National Fire Protection Association (NFPA) and features templates to help communities reduce risk and protect property from the dangers of wildland fires. Along with an interactive and resource-filled website full of free materials, the program offers training throughout the nation. Many Firewise workshops have been held across northeast Oregon where citizens and local agencies participated. For information concerning the Firewise program, visit online at <http://www.firewise.org>.

Fire-Resistant Plants for Oregon Home Landscapes

The OSU Extension Service in

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.

improving the chances of their home surviving a wildfire. 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 at <http://www.extension.oregonstate.edu/emergency/FireResPlants.pdf>.

Fuels Treatment Opportunities

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. Check with the Vale District-BLM office at <http://www.blm.gov/or/districts/vale/index.php> or call (541) 473-3144. Check with NRCS at <http://www.or.nrcs.usda.gov/> or call (541) 889-9689.

IV. Mission, Goals, and Objectives

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.

Goals and Objectives

- Identify areas at risk and their associated hazards -
 - Identify hazards that determine wildfire risk.
 - Evaluate areas to determine relative risk.
- Reduce wildfire risk to identified areas -
 - Utilize widespread and consistent partnerships with citizens, stakeholders, and agencies.
 - Improve emergency response through training and acquisition of equipment.
- Identify and treat hazardous fuels by priority –
 - Promote fire prevention and education.
 - 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.
- 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.
- Establish a monitoring and evaluation process -
 - Review goals and update plan as needed or as new information becomes available.
 - Evaluate actions for effectiveness.

V. Risk Assessment

Dynamac Study

Dynamac Corporation (Dynamac) was contracted to support the BLM in their assessment of wildfire risk to the communities in the wildland-urban interface during 2002. Dynamac scientists conducted fuel surveys by categorizing the vegetation, slope, and aspect of the land in the assessment area. The risk of wildland fire to homes, structures, and cultural resources on private land was also evaluated according to building materials, the presence of defensible space, road access, and the response time of the local fire department. Dynamac assessed the adequacy of the community's service infrastructure (including roads, water supplies, and fire fighting equipment) by systematic observation, and by interviewing community officials and fire prevention personnel. Community meetings were held to disseminate information about the Communities-at-Risk, Wildland-Urban Interface Program. The meetings provided residents the opportunity to identify resources that are of value to the community and to have residents identify actions that have the potential to reduce the risk of wildland fire in their community. The information gathered from the fuel surveys, structural surveys, interviews, infrastructure assessments, community profile and the community meeting was integrated into reports used by the BLM in their fuels treatment and fire prevention activities. The Malheur County CWPP group felt that the assessments and strategies developed during the Dynamac study would be helpful in guiding a second analysis during the project timeline for this plan.

Malheur County Wildfire Hazard Assessment

To identify and prioritize wildland-urban interface areas-at-risk in Malheur County, an assessment of factors was conducted; these factors contribute to large wildfire events that can leave communities vulnerable. This section will outline the process used and highlight unfamiliar definitions. Three key guidance documents were referenced in the assessment of communities-at-risk and the wildland-urban interface areas:

1. *Field Guidance: Identifying and Prioritizing Communities at Risk*. National Association of State Foresters. June 27, 2003. (Available at: <http://www.stateforesters.org/>)
2. *Concept for Identifying and Assessment of Communities at Risk in Oregon*. Draft prepared by Jim Wolf, Fire Behavior Analyst, Oregon Department of Forestry. July 19, 2004.

3. *WildlandUrban Interface Communities-at-Risk Program, Final Mitigation Recommendations*. Reports provided for BLM by Dynamac Corporation, 2002.

In Malheur County, a **community-at-risk (CAR)** is defined as a group of homes or other structures with basic infrastructure (such as shared transportation routes) and services within or near federal land. A **wildland-urban interface (WUI)** area surrounds a community-at-risk, including that community's infrastructure or water source, and may extend 1 ½ miles or more beyond that community. This boundary depends on topography and geographic features that could influence wildfire, the location of an effective firebreak, or Condition Class 3 lands.

It is important to understand the meaning of risk and hazard in relation to wildfire. **Risk** is the chance or probability of occurrence of fire. **Hazard** is the exposure to risk; in a wildfire situation, those hazards can be related to either the natural or the man-made environment. Natural hazards include fuel type and amount of fuels, topography, and weather. Man-made hazards include the limited availability of water, limited access to structures, limited green space around structures, and the ignitability of structures. The capability of firefighting resources will be compromised by the severity of both natural and man-made hazards.

Fire Occurrence/Risk of Ignition

The rate of fire occurrence is an important component of the assessment. Historical fire records were used for the last ten years (1997-2007). Data was compiled by the BLM. The fire occurrence rate (FOR) per 1,000 acres was used to yield a statistical analysis of the project area. The number of fires for the past ten years for Malheur County was determined in order to calculate fire occurrence per 1,000 acres. A fire occurrence rate for each identified WUI was calculated and a value was assigned to determine risk and to assist in prioritization of WUI areas within Malheur County.

Fuels / Vegetation

Data used to determine fuel hazard was derived from the State of Oregon Hazard Assessment conducted in 2005. For Malheur County, the increased risk of a large wildfire event is caused by the buildup of flashy fuels and changes in vegetation composition over time. A value was assigned to determine hazard level for each WUI.

Topographic Hazard

Slope and aspect affect both the intensity and rate of spread of a wildfire. The topography factor was derived from the Digital Elevation Model for Malheur County. A value was assigned to each WUI to determine hazard.

Weather Hazard

In Malheur County, weather patterns can produce summer lightning storms that start many fires. These multiple starts can put a strain on the wildland firefighting resources in the county. With the drying of fuels over time and the low relative humidity factored in, the probability for large fires can significantly increase during these lightning events. The number of days per season that fuels are capable of producing a significant fire event is also important to consider. Data provided by Oregon Department of Forestry that supports a hazard rating for weather is associated with a factor for eastern Oregon, which received the highest hazard rating for weather, including Malheur County. This value was assigned through an analysis of daily wildfire danger rating indices in each regulated use area of the state. This assigned value is constant across all WUI areas in Malheur County.

Overall Fire Protection Capability Hazards (Structural Vulnerability)

The Malheur County structural fire community supports a county fire defense board chief to make decisions related to overall structural fire response. An assessment of each structural fire protection district was conducted either by the chief of the associated district or the county fire defense board chief. In addition, information already gathered during the



Figure 9 - Structural Assist, Photo by Alan Crouch, BLM.

Dynamac study was also used. Consideration was given to the level of training/equipment/preparedness of firefighting resources, type of access to homes, density of structures across the county, availability of water sources, community preparedness, and structural vulnerability. A value was assigned to each WUI area.

Values at-Risk

This category was based on public input collected during community meetings, comments received from informational questionnaires, and information gathered during the Dynamac Study. Steering committee members provided input based on their local experience and knowledge of the areas as well.

Values at-risk are an important, but highly subjective component of the assessment. Values lost because of a devastating wildfire would affect residents in different ways. Malheur County's economy is impacted when large wildfires eliminated valuable rangeland for grazing and wildlife habitat, which affects landowners and local businesses. A fire could destroy recreational areas that draw tourists to the area: tourism is becoming a large component of the county's economy. Social values-at-risk include home and property, animals, and cultural and historical sites. Reduced visibility can be an environmental concern and can reduce the scenic views, considered one of the great assets of Malheur County. Comments from the ranching community identified the loss of grazing opportunities as the top concern. Numerous families maintain their livelihood on grazing contracts with the BLM. Loss of human life and loss of homes could be overwhelming for families, destroying the fabric of the close-knit, small-town atmosphere residents of Malheur County cherish about their communities.

Ecologically, general wildlife habitat and diversity, as well as threatened and endangered species of fish, wildlife, and plant life could be wiped out or severely harmed in the long-term depending on the intensity of the wildfire, leaving behind by the following spring a sprouting of invasive and noxious weeds. Water quality could be impacted if a moderate to high intensity wildfire burned through watersheds, affecting the health of fish and wildlife as well as domestic water supplies for residents.

Using the Hazard Assessment to Score WUI Areas

The Malheur County CWPP Committee identified communities-at-risk across the landscape using several factors. As previously defined, this could mean a group of homes or structures with basic infrastructure and services within or near

federal land. The next step was to designate WUI boundaries that would incorporate those communities-at-risk as appropriate by using assessment information (previously described). The hazard assessment information was used to develop a scoring matrix that would provide results that could be used for prioritizing the WUI areas within Malheur County (see Table 1).

The weighting of each element of the matrix was based on input received from the community, members of the steering committee, and information derived from the statewide assessment and scoring, and was not scientifically proven in any way. *A statistician was not involved in the process*, as this was meant to be community-driven, with input captured in its raw form by the community and the committee involved with its development.

The list of priorities helped the committee build an inventory of projects and action items that could be implemented to protect the WUI areas from large wildfire. A more complete explanation of each category is found in the appendices of this plan. An aggregate score of 23 points was established as the overall high score.

Table 1. 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 occurrence 2 pts – moderate occurrence 3 pts – high occurrence
Topographic Hazard (slope and aspect combined)	1 pt – 0% - 25% 3 pts – 25% - 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 capability
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.)	2 pts – high 1 pt – low
Total Points Possible = 23	

VI. Mitigation Action Plan

Prioritization of WUI Areas in Malheur County



The WUI boundaries were drawn to capture the overall limitations of each fire protection district, fuel hazard, CAR's, and values-at-risk. Logical anchor points on the landscape were used to designate WUI boundaries, including natural fuel breaks, ridgelines, and roads. Local knowledge and public input was also part of the decision process for determining WUI boundaries.

Seventeen WUI areas were identified for Malheur County. Based on the total points scored, each WUI was ranked with an adjective rating of High or Moderate

Figure 10 - Malheur County WUI areas identified.

Priority. This ranking will be used in establish funding for potential mitigation projects. It will also assist the county with planning needed to address additional concerns, like developing rules and policies associated with mitigation of large wildfire effects.

Table 2 – WUI Areas in Malheur County, by Priority.

Priority Level	WUI Name	Total Score
High	Ontario Heights	19
	Riverside	19
	Vale	19
	Owyhee Reservoir	18
	Harper	17
	Juntura	17
	Adrian	17
	Jordan Valley	17
	Moderate	Crowley
Rockville		16
Burns Junction		16
McDermitt		16
Rome		15
Nyssa		15
Basque Station		15
Annex		15
Ironside		14

Mitigation Strategies

The inventory of projects and action items that could be implemented to protect WUI areas in Malheur County is not all-inclusive. Community members who have other ideas to help protect their specific community can contact one of the committee members at any time. Communities are encouraged to use this information to improve upon the strategies listed. All projects are listed by category. The categories are Education, Fuels Treatment, or Emergency Preparedness. Education projects are those related to fire prevention or collaboration/awareness on a particular issue related to this CWPP. Fuels treatment projects are those related to treating fuels on the landscape or creating defensible space around homes. Emergency Preparedness projects are those related to emergency response in a wildfire event, either pre-suppression or suppression.

Education

Education comes in the form of delivery of fire prevention information to the public during community events, debris clean-up days, and signing during fire season. Due to the proximity of Malheur County to media outlets from the Treasure Valley in Idaho, use of radio and newspaper as a communication tool is

somewhat ineffective. The best approach is for agency personnel to outreach to the public where they are.

Fuels Treatment

The following is a list of the type of treatment that would be appropriate for the rangeland in Malheur County:

1. Grazing
2. Mowing
3. Plowing/Discing
4. Irrigation
5. Controlled burning
6. Re-seeding to natural vegetation

Land management agencies and organization have specific information related to effective use of treatment types mentioned in the list above. Landowners are encouraged to collaborate with land management agencies where necessary to protect the larger landscape. This will achieve optimum results and stretch limited grant or tax dollars as far as they can go. When trying to achieve the goal of reducing fuels to modify fire behavior, other issues related to erosion, grazing needs, and weed infestation need to be addressed.

Emergency Preparedness

The primary focus of the public safety portion of this fire plan is to protect lives, private property and key values from wildfire. As part of this public safety mission there is a partnership formed, between private property owners and businesses, non-profit organizations, county, state and federal agencies to increase the likelihood of homes, businesses and other developed properties to survive a nearby wildfire.

Home Site Access

Consider how you access your home. Fire suppression forces will always consider if accessing your home puts them at risk during fire suppression work. Firefighters may utilize structural fire fighting equipment, engines, brush rigs or tenders to protect homes from fire. These vehicles require more space to turn around in than cars and pickups.

Having an adequate and safe area for firefighters to work around your home is a factor of access. Issues like the grade of the road, surface material, length,

available turn-outs or turn-a-rounds are essential considerations when looking at protecting homes. Overgrown roadside vegetation could become a flame front, trapping firefighters. Above ground utility lines running along your access may also become a hazard. Clearly marked rural address numbers at the start of your access greatly aids fire suppression efforts. *Remember*, firefighters may be working during darkness to protect your home.

Evacuation

When a wildfire threatens a community our collective first priority is to protect life. The useful technique is to recommend people to move out of harm's way. Evacuation is simply a tool used to protect life during a hazardous/unpredictable event. By removing 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.

One of the necessary accompaniments with evacuations will be traffic control points established around the perimeter of the incident. Evacuations seek to remove the threat to life by displacing people out of the hazard area. Traffic control points are necessary to prevent people from getting back into the hazard area until it is determined safe to do so. It is critical that you obtain credible information and follow the directions given.

A community that maintains defensible space around their homes may significantly reduce the need to evacuate the community. And the defensible space likely will increase the survivability of the home. When necessary during evacuations, communities will be advised of locations opened as shelters to provide cover, food and information to those displaced by a wildfire. The American Red Cross (ARC) has a national mandate to provide these services and locally the ARC is integrated into Malheur County's emergency plan. The ARC also supports evacuees in obtaining emergency prescription medications and serving as a conduit for health or welfare messages between evacuees and family/friends. The Malheur County Sheriff's Office will be the lead agency in protecting property within evacuated areas and in establishing traffic control points related to wildfire.

Re-Entry

The incident commander of the agency with jurisdiction during a wildfire event will determine under what conditions re-entry into evacuated areas will occur on a case-by-case basis.

VII. Monitoring and Evaluation

Schedule

The maintenance for this plan will be directed by the Malheur County Court, and coordinated with the core committee members of the represented agencies. In short, resurrect the original committee that put this plan together in order to evaluate how goals and objectives are being accomplished as set forth in this plan.

Proposed CWPP plan maintenance will be set annually to review the plan, reevaluate priorities for action items and progress, with a total revision set for every five years. Annual review of the strategy recommendations will be necessary as various projects or tasks are accomplished and areas at-risk decline in hazard rating. Annual review will also be needed as County infrastructure needs change or are met and should include representation of stakeholders who participated in the development of the plan being reviewed.

A total revision of the plan every five years is recommended as Malheur County infrastructure needs change, specifically: population increases, fuels reduction projects are completed, emergency services are provided in outlying areas, and computer support needs are met or increased and areas of extreme wildfire hazard decline or increase.

Continued Public Involvement

The continued involvement by the public for the Malheur County Wildfire Protection Plan is needed to accomplish many of the recommendations. Copies of the plan will be available at the Malheur County Planning Department office, Malheur County public libraries, and on the web at: <http://www.odf.state.or.us/areas/eastern/northeast/malheurco/malheurcocwpp.htm>.

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 committee contact at any time.

VIII. Appendices

Appendix A. Acronyms and Glossary (associated with CWPP)

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

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.

Non-statistical Fires – ODF fires, commonly referred to as ‘non-stat’ fires that ignited on non-State protected land but threatened ODF protected property.

Oregon Senate Bill 360 – this 1997 legislation established the policy and framework for meeting the fire protection needs of the wildland-urban interface. One of the goals of the bill is to define the Interface in Oregon and establish a process and system for the classification of the Interface. Formal classification committees in each county will accomplish the classification. Work has begun in Jackson and Deschutes counties, with the remainder of the state planned for classification over the next ten years. The Northeast Oregon district of ODF has hired an employee to manage the SB360 work in the district.

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.

Appendix B. Web Sources

<http://www.malheurco.org/communitywildfireplan>

<http://www.nwfireplan.gov/>

<http://www.blm.gov/or/districts/vale/index.php>

<http://www.forestsandrangelands.gov/>

<http://egov.oregon.gov/ODF/>

<http://www.fema.gov/hazard/wildfire/>

<http://www.oregon.gov/OSP/SFM/>

<http://extension.oregonstate.edu/emergency/FireResPlants.pdf>

<http://www.unce.unr.edu/publications/files/nr/2006/sp0612.pdf> (Living with Fire)

Appendix C. Farm and Ranch Fire Safety Checklist

You can....

- ✓ **Use fire-resistant building materials.** Install metal, tile or concrete roofing material when building or remodeling. Use fire-resistant siding such as brick, metal, concrete or stucco. Cover all vents with 1/8" mesh screen to block embers from entering the structure.
- ✓ **Check the survivable space around your home and outbuildings.** Clear flammable vegetation and replace with fire-resistant plants or keep dry grass mowed. Move wood piles and lumber away from structures. Store gasoline, propane, fertilizer and other flammables away from the home (preferably in a metal shed). Check the distance between buildings and hay storage – have a plan to deal with a fire in any one structure to keep it from spreading to another.
- ✓ **Check the electrical wiring.** Ensure that electrical wiring is protected from potential animal damage and that it is grounded and adequate for the load. Avoid overloading circuits. This includes irrigation pumps.
- ✓ **Check around fueling areas.** Clear fueling areas of dry vegetation. Ground all fueling nozzles to avoid sparking a fire. Have a fire extinguisher available.
- ✓ **Check moisture content of hay.** Green hay fires are a common occurrence. Check stacks regularly; don't open a "hot stack" without adequate fire equipment on-site. Opening a stack will increase fire intensity.
- ✓ **Check all exhaust systems.** Place spark arrestors on all chimneys, stovepipes, tractors and other equipment. Hot carbon particles thrown from exhaust pipes can start a fire.
- ✓ **Be prepared when burning.** Ensure there is adequate clearance for open burning. Have fire-fighting equipment available. Check fires to make sure they are dead out before leaving the area.
- ✓ **Check welding areas.** Weld only in areas free of flammable vegetation and fuel. Have a plan for extinguishing any fire starts from sparks.
- ✓ **Check your firefighting equipment and water supply.** Always have both available and have a plan for catching any fire starts. You are the first line of defense in a wildfire.

Appendix D. Mitigation Action Worksheets (Alphabetical)

NOTE: This action worksheets are dynamic and should be evaluated annually. Ideally, these should be improved upon through community meetings. The scores reflect a number and an associated adjective rating (L=Low; M=Moderate; H=High)

CAR Name: Adrian

Priority Category: High

Description: This area includes Owyhee Corners, a high recreation area. Human-caused fires are a concern. This WUI area has both wildland and structural fire protection. Canals and bridges affect ingress/egress routes. Fires tend to grow to several thousand acres within a six-hour burn period caused by frontal pushes.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2 (M)	3 (M)	2 (L/M)	5 (H)	3 (H)	2 (H)	17(H)

Education Projects

- Distribute fire prevention materials at events like Thunderegg Days.
- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.

Emergency Response Projects

- Identify canals and bridges and create a map layer for use in emergency evacuation and response projects.
- Encourage posting of load limits on all bridges.
- Ensure Rural Addressing is up-to-date and up-to-code.

CAR Name: Annex

Priority Category: Moderate

Description: This area is protected by Weiser Rural and is located outside of Weiser, Idaho. Water supply can be a limitation.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
1(L)	3 (M)	3 (M)	3 (M)	3 (H)	2 (H)	15(M)

Education Projects

- Distribute fire prevention materials at community events.
- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- BLM – Ontario Heights project.
- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify water sources to aid in fire response; create a map layer for use in emergency evacuation and response projects.
- Install water hydrants or storage facilities.

CAR Name: Basque Station

Priority Category: Moderate

Description: Power lines and an ODOT compound are within this area. Fires are generally started along the highway from passing vehicles or vehicle malfunction. Whitehorse Ranch Compound is also within this WUI area.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	3 (M)	3 (M)	3 (M)	3 (H)	1 (L)	15(M)

Education Projects

- Distribute fire prevention materials at community events.
- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Post Keep Oregon Green signs along highway or other fire prevention signs.

Treatment Projects

- BLM – Jackie’s Butte.
- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Utility companies maintain clearance of vegetation within a minimum of thirty feet around all electrical transfer stations; patrol utility right-of-way during extreme fire danger.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify water sources to aid in fire response; create a map layer for use in emergency evacuation and response projects.

CAR Name: Burns Junction

Priority Category: Moderate

Description: Burns Junction contains a post office, store, airstrip, and RV park. There is also an ODOT weigh station and a BLM guard station. This WUI area has wildland fire protection.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
1 (L)	3 (M)	3 (M)	5 (H)	3 (H)	1 (L)	16 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Post fire danger signs and/or prevention messages along highways.

Treatment Projects

- Potential and/or completed BLM projects – Rome, Jackie’s Butte.
- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify water sources to aid in fire response; create a map layer for use in emergency evacuation and response projects.

CAR Name: Crowley

Priority Category: Moderate

Description: The landowners in this area are 1 hour from Burns Junction and 1 ½ hours from Juntura. The area is comprised of scattered ranches. State Lands have an interest in the area as well. Wildland fire protection is available, either by BLM or the local RPA.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
1(L)	3 (M)	3 (M)	5 (H)	3 (H)	1 (L)	16 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Post fire danger signs and/or prevention messages along highways.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Grazing may be utilized as a fuels treatment activity on State Lands.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify water sources to aid in fire response; create a map layer for use in emergency evacuation and response projects.

CAR Name: Harper

Priority Category: High

Description: This WUI area contains communities like Harper, West Fall, and Little Valley. Wildland fire protection is available, either by BLM or the local RPA. Access between Harper and Little Valley is limited.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	5 (H)	1 (L)	5 (H)	3 (H)	1 (L)	17 (H)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- BLM – West Fall project needs maintained.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Support Vale RPA.
- Identify canals and bridges and create a map layer for use in emergency evacuation and response projects.

CAR Name: Ironside

Priority Category: Moderate

Description: This WUI area does not have available structural fire protection. Wildland fire protection is available, either by BLM or the local RPA. There are scattered homes/ranches in the area.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
1(L)	3 (M)	3 (M)	3 (M)	3 (H)	1 (L)	14 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Ironside RPA will need to take the lead on fuel break projects on private land. NRCS may have funds available.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Support Ironside RPA.

CAR Name: Jordan Valley

Priority Category: High

Description: This WUI area contains communities like Jordan Valley, Arock, Danner Loop, and Pleasant Valley. Wildland fire protection is available, either by BLM or the local RPA; structural fire protection is available to those close to the community of Jordan Valley.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	3 (M)	3 (M)	5 (H)	3 (H)	1 (L)	17 (H)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Distribute fire prevention materials at community events.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- BLM – West Fall project needs maintained; Jordan Crater proposed.
- Coordinate with Owyhee County in Idaho where appropriate.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Support Jordan Valley RPA and Jordan Valley Rural Fire Protection District.
- Improve cistern/water storage facilities.
- Identify water sources to aid in fire response; create a map layer for use in emergency evacuation and response projects.

CAR Name: Juntura

Priority Category: High

Description: This WUI area experiences lightning events that have started many large fires. Topography and wind are factors with regard to fire spread. Wildland fire protection is available, either by BLM or the local RPA.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	5 (H)	1 (L)	5 (H)	3 (H)	1 (L)	17 (H)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- BLM – annual grass restoration project (west side of Juntura, Riverside Road).
- Juniper fuels reduction (coordinate with NRCS).

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Support Juntura RPA.

CAR Name: McDermitt

Priority Category: Moderate

Description: The assessment conducted for this WUI area refers to the Oregon portion only. The community is located on both sides of the Oregon-Nevada line. The WUI includes the tribal ground on the Oregon side as well. The Dynamac study concluded the hazard category was low; however, the assessment completed for this plan determined the hazard category to be moderate. The area has both wildland and structural fire protection available.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	3 (M)	2 (L/M)	5 (H)	3 (H)	1 (L)	16 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Post Keep Oregon Green signs along highway or other fire prevention signs.
- Distribute fire prevention materials at community events.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- BLM – annual grass restoration project (west side of Juntura, Riverside Road); 15,000 acres have been treated.
- Highway departments to create buffers along the highways.
- Coordinate with Humboldt County in Nevada on any proposed projects.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Support McDermitt VFD.

CAR Name: Nyssa

Priority Category: Moderate

Description: This WUI contains the City of Nyssa. It is unclear as to who has structural fire protection responsibility for the structures outside of Nyssa. There are a number of structures located around Nyssa that are sited in drainages. In addition, a canal system that is located in the area may slow response time and impede access.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	3 (M)	0 (L)	5 (H)	3 (H)	2 (H)	15 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Distribute fire prevention materials at community events.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- BLM – Cow Hollow, Lincoln Bench.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify canals and bridges and create a map layer for use in emergency evacuation and response projects.

CAR Name: Ontario Heights

Priority Category: High

Description: This WUI contains a high concentration of homes and is located outside of the City of Ontario. Payette Rural and City of Ontario both respond to structural fires in the area. In addition, BLM provides wildland fire protection on the BLM lands.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
3 (H)	5 (H)	2 (L/M)	5 (H)	3 (H)	2 (H)	19 (H)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI; promote “Clean Up” days during the Fall and Spring.
- Heighten awareness of Firewise; explore whether or not this area would qualify as a Firewise community.
- Distribute fire prevention materials at community events.
- Improve participation in the prevention co-op.
- Outreach to schools once a year, targeting structural and wildland fire safety.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- BLM – Maintain completed fuels treatment projects.
- Promote perennial fire-resistant plants and grasses; eliminate annual grasses/weeds.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify canals and bridges and create a map layer for use in emergency evacuation and response projects.
- Revise Emergency Operating Plan to include wildfire response.
- Promote wildland fire training and Ready Reserve.
- City of Ontario needs to replace small brush truck.

CAR Name: Owyhee Reservoir

Priority Category: High

Description: This WUI area contains in a high recreational use area. Human-caused fires are a concern. Also, many cabins exist along the reservoir shores, but it takes nearly two hours to respond due to poor road conditions and limited access (only by boat or air, in some cases). Cabins are located on State Lands and Bureau of Reclamation lands. There are cabins in the Dry Creek area and Fisherman’s Cove. The west side of Pelican Point is where the airstrip is located.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
1 (L)	5 (H)	3 (M)	5 (H)	3 (H)	1 (L)	18 (H)

Education Projects

- Gear fire prevention messages towards recreation activities in the area.
- Promote defensible space clean-up around cabins.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.

Emergency Response Projects

- Identify all cabins in the area and create a map layer for use in emergency evacuation and response projects.

CAR Name: Riverside

Priority Category: High

Description: Riverside is considered an historic location within the County. An Oregon Department of Fish & Wildlife station is located within the WUI area as well. Weeds and annual grasses are a problem in the area, which contributes to large fire growth.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2 (M)	5 (H)	3 (M)	5 (H)	3 (H)	1 (L)	19 (H)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Promote perennial fire-resistant plants and grasses; eliminate annual grasses/weeds.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Encourage participation in Juntura RPA.

CAR Name: Rockville

Priority Category: Moderate

Description: Rockville consists of cultural resources, including an historic school house. There are a few ranches within the WUI area. Response time to the area is long. The area has wildland fire protection on BLM land only, but no structural fire protection for the homes in the area.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2 (M)	3 (M)	2 (L/M)	5 (H)	3 (H)	1 (L)	16 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Promote perennial fire-resistant plants and grasses; eliminate annual grasses/weeds.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.

CAR Name: Rome

Priority Category: Moderate

Description: A gas station and small grocery store and several homes are located in this recreational area. This WUI contains a take-out/put-in for rafters and boat launch. The area has wildland fire protection on BLM land only, but no structural fire protection for the homes in the area.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2 (M)	3 (M)	1 (L)	5 (H)	3 (H)	1 (L)	15 (M)

Education Projects

- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.

Treatment Projects

- BLM – Rome/Arock fuels treatment project is 950 acres; Jackie’s Butte.
- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Promote perennial fire-resistant plants and grasses; eliminate annual grasses/weeds.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Encourage participation in Jordan Valley RPA.

CAR Name: Vale

Priority Category: High

Description: This WUI area contains communities like Brogan, Jamieson, Vale, Bully Creek, Sand Hollow and Cow Hollow. All area closest to the community of Vale have both wildland and structural fire protection; all other communities may only have wildland fire protection or none at all.

Risk Assessment Factors

Fire Occurrence	Topography	Total Fuels	Protection Capability	Weather	Values At-Risk	Aggregate Score
2(M)	5 (H)	2 (L/M)	5 (H)	3 (H)	2 (H)	19 (H)

Education Projects

- Utilize SRVCA for fire prevention co-op activities.
- Distribute fire prevention materials at community events.
- Distribute Firewise and Farm and Ranch Fire Safety information to homeowners/landowners in WUI.
- Post fire danger signs and/or prevention messages within Bully Creek area (high recreation use).

Treatment Projects

- Potential and/or completed BLM projects – Tub Mountain, Lincoln Bench, Butler’s Bench.
- Prescribed burning and re-seeding with native grasses (on federal land, Threatened and Endangered species will limit activity), including other treatment techniques as well and where necessary.
- Discing along property lines/ridge tops.
- Utility companies maintain clearance of vegetation within a minimum of thirty feet around all electrical transfer stations; patrol utility right-of-way during extreme fire danger.

Emergency Response Projects

- Ensure Rural Addressing is up-to-date and up-to-code.
- Identify canals and bridges and create a map layer for use in emergency evacuation and response projects.
- Conduct annual mutual aid response exercise.

Appendix E. Plan Locations

Malheur County Emergency Management
Malheur County Sheriff's Office
Attn: Ron Hunsucker
151 "B" St. West
Vale, OR 97918

Malheur County Planning Department
Attn: Jon Beal
251 "B" St. West #12
Vale, OR 97918

Ontario Fire & Rescue
444 SW 4th Street
Ontario, OR 97914

BLM – Vale District Office
Attn: Fire and Fuels
100 Oregon St.
Vale, OR 97918

Oregon Department of Forestry
Northeast Oregon District
611 20th Street
La Grande, OR 97850

City of Vale
252 "B" Street West
Vale, Oregon 97918

Vale Rural Fire Department
Attn: Chief Hesse
252 "B" Street West
Vale, OR 97918

Also, on the web at <http://www.malheurco.org/communitywildfireplan>.