Upper Deschutes River Community Wildfire Protection Plan

2018

A community-driven plan developed in collaboration with:

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Copies of this CWPP are available at www.UDRC.org and www.projectwildfire.org

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Executive Summary

Purpose

Community Wildfire Protection Plans (CWPPs) are documents that are designed by a local group of stakeholders who are invested in the wildland fire threat to their area. The group of stakeholders typically consists of a representative from the fire department(s), the state Forestry Department, any governing bodies and especially property owners. Each of these representatives should bring their concerns regarding wildland fire to the discussion and propose solutions to their concerns.

Although reducing the risk of high intensity wildland fire is the primary motivation behind this plan, managing the larger landscape to restore forest health and more resilient conditions and improving fire response by all fire agencies are also discussed and addressed in the action plan. Continued efforts have been made by County, State and Federal land management agencies to reduce the threat of high intensity wildland fires through education and fuels reduction activities on public lands. In addition, private property owners have responded enthusiastically to the defensible space and preparation guidelines and recommendations to reduce hazardous fuels on their own properties by participating in programs such as Firewise and FireFree. All of these activities allow the Upper Deschutes River Area to become a more Fire Adapted Community.

Since its creation in December 2005, the Upper Deschutes River Community Wildfire Protection Plan has been reviewed twice (2013 and 2018) by a local steering committee to be applied as it was intended by a wide variety of private landowners and public agencies to decrease the risks of high intensity wildfire in the South County Area.

The 2018 Upper Deschutes River Community Wildfire Protection Plan will assist all agencies and local property owners in the identification and prioritization of all lands, including surrounding public lands that are at risk from high intensity wildland fire. The Upper Deschutes River CWPP identifies priorities and strategies for reducing hazardous wildland fuels while improving forest health, supporting local industry, and economy and improving fire protection capabilities.

Addressing these goals in a cooperative, collaborative manner maintains alignment with the goals outlined in the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy) – resilient landscapes, Fire Adapted Communities and safe and effective wildfire response. For more information on Cohesive Strategy, visit http://www.forestsandrangelands.gov/.

The goals of the Upper Deschutes River CWPP are to:

- Protect lives and property from wildland fires;
- Maintain a watershed with healthy fire resistant forests providing quality fish and wildlife habitat;
- Instill a sense of responsibility among residents, visitors, conservation groups and federal, state and local agencies to take preventive actions regarding wildland fire;
- Provide guidance to federal agencies for implementing fuels reduction treatments;
- Prioritize the use of limited funds for the treatment of hazardous fuels;
- Create and maintain fire adapted communities;
- Increase public understanding of living in a fire-adapted ecosystem;
- Increase the ability of UDR communities to prepare for, respond to and recover from wildland fires;
- Restore fire-adapted ecosystems with diverse, multi-structured forests emphasizing large ponderosa pine trees;
- Improve the fire resilience of the landscape while protecting other social, economic and ecological values.

The Upper Deschutes River CWPP integrates information from a variety of sources to present a comprehensive picture of risk and possible treatments on the landscape and enable community organizations and their partners to act in a coordinated fashion. A completed plan also allows the adjacent federal land management agencies to make use of the expedited authorities provided by the Healthy Forest Initiative (HFI) and the Healthy Forest Restoration Act (HRFA). In addition, for communities seeking federal grant funding from the National Fire Plan, a completed community wildfire protection plan has become a *de facto* requirement. Lastly, developing a community wildfire protection plan is a powerful tool to help get local residents and visitors involved in fire protection efforts.

Planning Area Boundaries

The Upper Deschutes River CWPP is multi-jurisdictional and addresses all lands and all ownerships within the boundaries of the plan area. The southern edge of the boundary is the northern boundary of the Greater La Pine CWPP and the northern boundary is the Sunriver CWPP. Both the west and east sides of the WUI are met by the East-Wet Deschutes County CWPP boundary.

In all seven (7) identified sub regions, the WUI boundary meets the CWPP planning area boundary. For the purposes of this plan, the wildland urban interface (WUI) boundary and the CWPP planning area are the same geographical region. The Upper Deschutes River wildland urban interface boundary is approximately 102 square miles and covers 65,510 acres.

Geography and the Environment

The Upper Deschutes River planning area is located between Sunriver and La Pine, Oregon adjacent to US Forest Service and BLM public lands. It is comprised of 65,510 acres rich with ponderosa & lodgepole forests, meandering rivers and diverse wildlife. There are 6,453 lots in the planning area ranging in size from ½ acre to over 40 acres in size. Dispersed among those lots are 3,488 structures with an estimated resident population of 8,720. Approximately half of the private lots are vacant, with no structures.

Historically the area was characterized by open stands of ponderosa pine and native grasslands. Following logging in the first half of the 1900's many of these stands naturally regenerated to lodgepole pine. Lodgepole pine is a species that lives and dies by high intensity and active stand replacement crown fires. It is therefore less desirable from a wildland fire perspective because of the risk these stands pose to the communities and activities nearby.

Today, with less stand management, logging activity and highly effective wildland fire suppression, the forestland is predominantly dense lodgepole pine with some mixed stands of lodgepole and ponderosa pine. Much of the understory consists of dense bitterbrush with some areas of native bunchgrasses. Due to the lack of disturbance, these stands continue to become more and more overcrowded.

Wildland Fire Risk Assessment

The CWPP steering committee undertook a wildland fire assessment to gauge the relative risk and hazard due to wildland fire for the lands and communities within the planning area. It is a tool to direct implementation of wildfire mitigation activities to the highest priority areas and promote cross-boundary coordination. The assessment:

1) Assessed risk, hazard, fire protection capability, structural vulnerability, and values to be protected
2) Identified and ranked "communities at risk" within the plan area. These community rankings identified the priority areas for fuel reduction activities and other mitigation projects within the plan area.

The Upper Deschutes River CWPP used the risk assessment methodology from the National Association of State Foresters and the Oregon Department of Forestry. The assessment considers five categories in determining the relative severity of fire risk:

- *Risk*– the likelihood of a fire occurring (based on past occurrences of human and lightning caused fires)
- *Hazard*– the conditions that hinder control of a wildland fire once it starts (fuels, slope, aspect, elevation and weather)
- *Values*– the people, property, natural resources, and other resources that could be lost in a wildland fire event

- *Structural Vulnerability*–the elements of a structure (roof type and building materials, access to the structure, and existing defensible space or fuels reduction around the structure) that affect its likelihood of burning
- *Protection Capability*–the ability to mitigate losses and prepare for, respond to, and suppress wildland and structural fires

Assessment Community Rankings (Table 1)

Community Name	Average	2018 Rank	2013 Rank
Little Deschutes	146	**1**	2-T
Foster Road	142	**2**	3
Three Rivers	142	**3**	2-T
Haner Park	141	**4**	5
Big River	124	**5**	1
Fall River	115	**6**	6
Wild River	102	**7**	4

While the Three Rivers and Foster Road rating areas were assigned the same average risk, the Steering Committee assigned the Foster Road rating area a higher priority ranking due to its location and the prevailing winds and fire behavior in the area.

The Upper Deschutes River Community Wildfire Protection Plan was developed by and for the community members to enhance their understanding of their local surroundings and how their landscape determines their risk of wildland fire. Each risk assessment and recommendation in this plan has been made after careful consideration by the Steering Committee. Specific recommendations for homeowners to reduce their risk can be found on pages 41-43 and 46-47 of this CWPP. The Steering Committee's recommendations to achieve more fire resilient landscapes can be found on pages 48 and 49 of this CWPP.

Acknowledgements

Assembled within the true spirit of collaboration, the following people are acknowledged for their participation and commitment resulting in this 2018 Upper Deschutes River Community Wildfire Protection Plan.

Jake Akenberg	Prineville District BLM
Ray Cecchi	Upper Deschutes River Coalition Board, River Meadows
Jeff Crawford	Bend-Fort Rock District, US Forest Service
Monte Dammarell	Upper Deschutes River Coalition Chair, Huntington Road
Dan Daugherty	La Pine Rural Fire Protection District, Assistant Chief
Dean Drabin	Upper Deschutes River Coalition Board, OWW I
Ben Duda	Oregon Department of Forestry, Assistant Unit Forester
Kent Elliot	Sunriver Chamber, Spring River
Alex Enna	Deschutes National Forest
Alison Green	Project Wildfire Coordinator
Jerry Hubbard	Upper Deschutes River Coalition Board, DRRH 1-5
Carl Jansen	Upper Deschutes River Coalition Board, Spring River
Ed Keith	Deschutes County Forester
Jim Larsen	Upper Deschutes River Coalition Board, Cougar Grove
Dean Richardson	Upper Deschutes River Coalition Board, Fall River
Kim Spina	Upper Deschutes River Coalition, River Forest Acres
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Upper Deschutes River
Community Wildfire Protection Plan

Incorporated in 2004 as a non-profit corporation, the Upper Deschutes River Coalition (UDRC) is comprised of 26 neighborhoods and communities "collectively addressing natural resource issues along the Upper Deschutes River and its tributaries".

The mission of the UDRC is to:

- Ensure healthy, fire-resistant forests
- Promote clean and abundant river flows
- Enhance beneficial wildlife habitat

The UDRC continues to increase its membership with neighborhoods and communities interested in furthering the restoration and protection of natural resources along the Upper Deschutes River. The UDRC acknowledges that there are neighborhoods in this planning area that are not members of the non-profit group. **Regardless of official membership in the Coalition, all neighborhoods and ownerships within the planning area are addressed by this Community Wildfire Protection Plan (CWPP).**

At the time of our first CWPP, there existed no template for such an effort. All we knew was that our region was continuously at risk from the threat of wildfire, and therefore the need existed to find a way to address and hopefully mitigate that threat in a coordinated, community-wide manner. The Upper Deschutes River Coalition was formed to confront that issue, and a few months later, with the invaluable assistance and cooperation of several agencies, among them Project Wildfire, the BLM, Oregon Department of Forestry and the US Forest Service, the first CWPP was completed.

Thanks in large measure to what was in that plan and the one following it, we have been able to turn words into actions - both in the form of on-the-ground work and in landowner education - which have resulted in numerous Fire Adapted Communities within our coalition. As an additional benefit, this work has also resulted in our organization enjoying greater recognition and influence outside our boundaries.

Of course, along with growing experience comes the recognition that our work is far from done; that in fact, the job of confronting the threat of wildfire will always be with us. Therefore this, our third CWPP is revised and updated with what we have learned about the process, as well as reflecting the changes in conditions that our previous efforts have brought about.

Dean Drabin, Resident
Upper Deschutes River Coalition

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Purpose

The purpose and goals of the Upper Deschutes River CWPP are to:

- **Protect lives and property from wildland fires;**
- **Maintain a watershed with healthy fire resistant forests providing quality fish and wildlife habitat;**
- **Instill a sense of responsibility among residents, visitors, conservation groups and federal, state and local agencies to take preventive actions regarding wildland fire;**
- **Provide guidance to federal agencies for implementing fuels reduction treatments;**
- **Prioritize the use of limited funds for the treatment of hazardous fuels;**
- **Create and maintain fire adapted communities;**
- **Increase public understanding of living in a fire-adapted ecosystem;**
- **Increase the ability of UDR communities to prepare for, respond to and recover from wildland fires;**
- **Restore fire-adapted ecosystems with diverse, multi-structured forests emphasizing large ponderosa pine trees;**
- **Improve the fire resilience of the landscape while protecting other social, economic and ecological values.**

Since its creation in December 2005, the Upper Deschutes River Community Wildfire Protection Plan has been reviewed twice (2013 and 2018) by a local steering committee to be applied as it was intended by a wide variety of private landowners and public agencies to decrease the risks of high intensity wildfire in the South County Area.

This CWPP also addresses special areas of concern and makes recommendations for reducing structural vulnerability and creating fire adapted communities in the identified Communities at Risk. It is intended to be a living vehicle for fuels reduction, educational, and other projects to decrease overall risks of loss from wildland fire; reviewed yearly and updated every five years to address its purpose.

Wildland fire is a natural and necessary component of ecosystems across the country. Central Oregon is no exception. Historically, wildland fires have shaped the forests and rangelands valued by residents and visitors. These lands are now significantly altered, or "out of whack" due to fire prevention efforts, modern suppression activities and a general lack of large scale fires resulting in large tracts of overstocked ponderosa and lodgepole pine forests with dense ground fuels of bitterbrush and saplings which burn hotter and more intensely than in the past. In addition, the

recent explosion in population has led to increased residential development into forests in the wildland urban interface (WUI).

Within these boundaries, there is a significant amount of public land with numerous destination resorts, and developed and dispersed recreation sites which provide valuable recreation and economic opportunities to both residents and visitors in Deschutes County. In the summer months, transient populations occupy these areas creating a seasonal challenge for those agencies responsible for fire suppression and evacuation.

To address these issues, the UDRC continues to take proactive steps to collaborate with members of fire agencies, local businesses and organizations, and individuals to produce a robust and useful Community Wildfire Protection Plan.

Planning Summary

The Deschutes County Board of Commissioners adopted the most recent update of the Upper Deschutes River Community Wildfire Protection Plan in March 2013. Continued efforts have also been made by county, state and federal land management agencies to reduce the threat of high intensity wildland fires through education and fuels reduction activities on public lands. In addition, private residents have responded enthusiastically to the defensible space and preparation guidelines and recommendations to reduce hazardous fuels on their own properties.

Since that time, the UDRC continues to be a leader in implementing projects that address the critical condition of the forestlands and watershed of the Upper Deschutes River area. The Coalition is also an active participant in Project Wildfire and participates regularly in wildfire prevention education and activities.

Although reducing the risk of high intensity wildland fire is the primary motivation behind this plan, managing the wildlands for hazardous fuels reduction and fire resilience is only one part of the larger picture. Residents and visitors desire healthy, fire-resilient wildlands that provide habitat for wildlife, recreational and economic opportunities, and scenic beauty.

In keeping with the strategy of the original UDRC CWPP, the Steering Committee revisited the planning outline in *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities* (Communities Committee, Society of American Foresters, National Association of Counties, and National Association of State Foresters 2005); and Deschutes County Resolution 2004-093.

Eight steps are outlined to help guide Steering Committees through the planning process:

Step one: Convene the decision makers.

The UDR CWPP Steering Committee reconvened in April 2018 to review the work completed within and adjacent to the WUI boundaries on public and private lands; and reevaluate the priorities for future fuels reduction treatments. The Steering Committee is comprised of the Program Director from Project Wildfire; the representatives from the UDRC board; representatives from Oregon Department of Forestry (ODF); representatives from the Bureau of Land Management and the US Forest Service, the Deschutes County Forester, other stakeholders and members of the public.

Step two: Involve state and federal agencies.

The Healthy Forests Restoration Act (HFRA) directed communities to collaborate with local and state government representatives, in consultation with federal agencies and other interested parties in the development of a CWPP. The Steering Committee recognized the importance of this collaboration and involved not only members from the USDA Forest Service and USDI Bureau of

Land Management (BLM) but Oregon Department of Forestry (ODF) and Deschutes County representatives as well. Each agency brought a wealth of information about fuels reduction efforts planned and completed along with educational information based on current research across the nation.

Step three: Engage interested parties.

Representatives from the Communities at Risk participated on the Steering Committee. The Steering Committee also included members of local businesses, homeowner/neighborhood associations, and other organizations and individuals.

Step four: Establish a community base map.

The Steering Committee reviewed the previous maps and boundaries from the 2013 CWPP. The group approved the 2018 CWPP boundary with one notable change. The Steering Committee determined that the CWPP Planning Boundary and the WUI Boundary should be the same boundary. In the past, there were areas within the plan considered "Rural Areas". The Steering Committee felt that this change in the boundary accurately reflects the wildfire risk and will allow for better strategic planning in the future by all agencies.

Step five: Develop a community risk assessment.

The Steering Committee relied on the ODF Assessment of Risk Factors and the Structural Vulnerability factors for each of the seven (7) Communities at Risk.

Step six: Establish community hazard reduction priorities and recommendations to reduce structural ignitability.

Based on the assessments, the Steering Committee produced three groups of priorities for fuels reduction treatments on public and private lands. The Steering Committee also made recommendations to reduce structural ignitability based on information in the assessments and local knowledge.

Step seven: Develop an action plan and assessment strategy.

The Steering Committee identified an action plan for key projects; roles and responsibilities for carrying out the purpose of the CWPP; potential funding needs, post fire recovery considerations and the evaluation process for the CWPP itself.

Step eight: Finalize the Community Wildfire Protection Plan.

A draft of the UDR CWPP was available for public comment prior to the final signing and approval of the plan. The UDR Community Wildfire Protection Plan was mutually approved by the Upper Deschutes River Coalition, the Oregon Department of Forestry, the La Pine Rural Fire Protection District and the Deschutes County Board of Commissioners as demonstrated in the Declaration of Agreement.

Collaboration

In 2002, President George W. Bush established the Healthy Forests Initiative (HFI) to improve regulatory processes to ensure more timely decisions, greater efficiency and better results in reducing the risk of high intensity wildfire. This initiative allowed forest management agencies for the first time, to expedite the documentation process for the purpose of reducing hazardous fuels on public lands.

In 2003, the US Congress passed historical bi-partisan legislation: the Healthy Forests Restoration Act (HFRA). This legislation expands the initial effort under the Healthy Forests Initiative and directs federal agencies to collaborate with communities in developing a CWPP, which includes the identification and prioritization of areas needing hazardous fuels treatment. It further provides opportunities and authority for federal agencies to expedite the National Environmental Policy Act (NEPA) process for fuels reduction projects on federal lands. The act also requires that 50% of funding allocated to fuels projects be used in the wildland urban interface.

Communities now have the opportunity to participate in determining where federal agencies place their fuels reduction efforts. With a CWPP in place, community groups can apply for federal grants to treat hazardous fuels and address special concerns to reduce the risk of catastrophic loss as a result of wildland fire.

Although some of the capabilities and authority under HFI and HFRA have been challenged in federal courts, all have been successfully upheld and the original intent and validations under each remain the same.

In 2009, Congress passed the Federal Land Assistance, Management, and Enhancement (FLAME) Act and called for a National Cohesive Wildland Fire Management Strategy to address wildland fire related issues across the nation in a collaborative, cohesive manner. The Cohesive Strategy was finalized in 2014 and represents the evolution of national fire policy:

To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.

The primary, national goals identified as necessary to achieving the vision are:

Resilient landscapes: Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.

Fire-adapted communities: Human populations and infrastructure can withstand a wildfire without loss of life and property.

Wildfire response: All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

Building a collaborative and cooperative environment with the fire department(s), community-based organizations, local government, and the public land management agencies has been the first step in reducing the risk of loss from wildland fire. The Steering Committee pledges to maintain this cooperation with the public over the long term with the commitment of all the participants involved. The importance of collaboration with neighboring CWPPs is recognized by the Steering Committee and is referenced throughout this CWPP as documentation of collaborative efforts to maximize hazardous fuels reduction efforts in the area. The Steering Committee agrees that the Upper Deschutes River Community Wildfire Protection Plan will be a living document, intended to promote fuels reduction, education, and other projects to decrease overall risks of loss from wildland fire; it is intended to be revisited at least annually to address its purpose.

At a minimum, the Upper Deschutes River Community CWPP Steering Committee shall include: representatives from La Pine Rural Fire Protection District; representatives from Oregon Department of Forestry (ODF); representatives from the Upper Deschutes River Coalition; representatives from Bureau of Land Management (BLM); the Deschutes County; and the Program Director from Project Wildfire, along with members of the public.

Updated Background Information

Deschutes County is located in central Oregon and is a rapidly growing social, economic, and recreational destination. Deschutes County continues to be the fastest growing county in Oregon, according to Portland State University. In just the past year Deschutes County's population has grown by 3.6%.

The Upper Deschutes River planning area is located between Sunriver and La Pine, Oregon adjacent to US Forest Service and BLM public lands. It is comprised of 65,510 acres rich with ponderosa & lodgepole forests, meandering rivers and diverse wildlife. There are 6,453 lots in the planning area ranging in size from ½ acre to over 40 acres in size. Dispersed among those lots are 3,488 structures with an estimated resident population of 8,720. Approximately half of the private lots are vacant, with no structures.

Historically the area was characterized by open stands of ponderosa pine and native grasslands. Following logging in the first half of the 1900's many of these stands naturally regenerated to lodgepole pine. Lodgepole pine is a species that lives and dies by high intensity and active stand replacement crown fires. It is therefore less desirable from a wildland fire perspective because of the risk these stands pose to the communities and activities nearby.

Today, with less stand management, logging activity and highly effective wildland fire suppression, the forestland is predominantly dense lodgepole pine with some mixed stands of lodgepole and ponderosa pine. Much of the understory consists of dense bitterbrush with some areas of native bunchgrasses. Due to the lack of disturbance, these stands continue to become more and more overcrowded.

The climate in all areas is considered semi-arid and typical of the east slopes of the Cascade Mountains, with most of the annual precipitation coming as winter snow or fall and spring rains. Summers are dry and prone to frequent thunderstorms with lightning storms producing multiple fire ignitions.

US Highway 97, a major transportation route through the state, runs north to south, directly through the planning area. As central Oregon grows, more residents and tourists crowd the highways and increase congestion, particularly during the summer months when fire season reaches its peak. As part of the central community, transportation routes are included in the consideration of the WUI boundary due to their critical role as roads and travel corridors that link communities together and serve as evacuation routes.

Public and Private Accomplishments

As part of the ongoing wildland fire risk management of the surrounding public and private forestlands, the US Forest Service, the Bureau of Land Management, Oregon Department of Forestry, and private landowners are engaged in hazardous fuels treatment projects across the CWPP planning boundary.

US Forest Service & Bureau of Land Management

Currently, under the combined management of the Central Oregon Fire Management Service (COFMS), the US Forest Service and the Bureau of Land Management are involved in multiple fuels projects in WUI areas that stretch across this CWPP planning area to reduce hazardous fuels and the likelihood of high intensity wildfire.

It is important to note that each project area requires multiple types of fuels reduction activities to achieve the desired result including mechanical shrub mowing, tree thinning, hand piling, and prescribed burning. Therefore, multiple entries are required in order to adequately reduce hazardous fuels and restore forest ecosystem health. The ultimate goal for these projects is to reduce the potential for high intensity fire that can spread to tree crowns, requiring costly suppression efforts and causing large losses on the landscape as well as in and around communities.

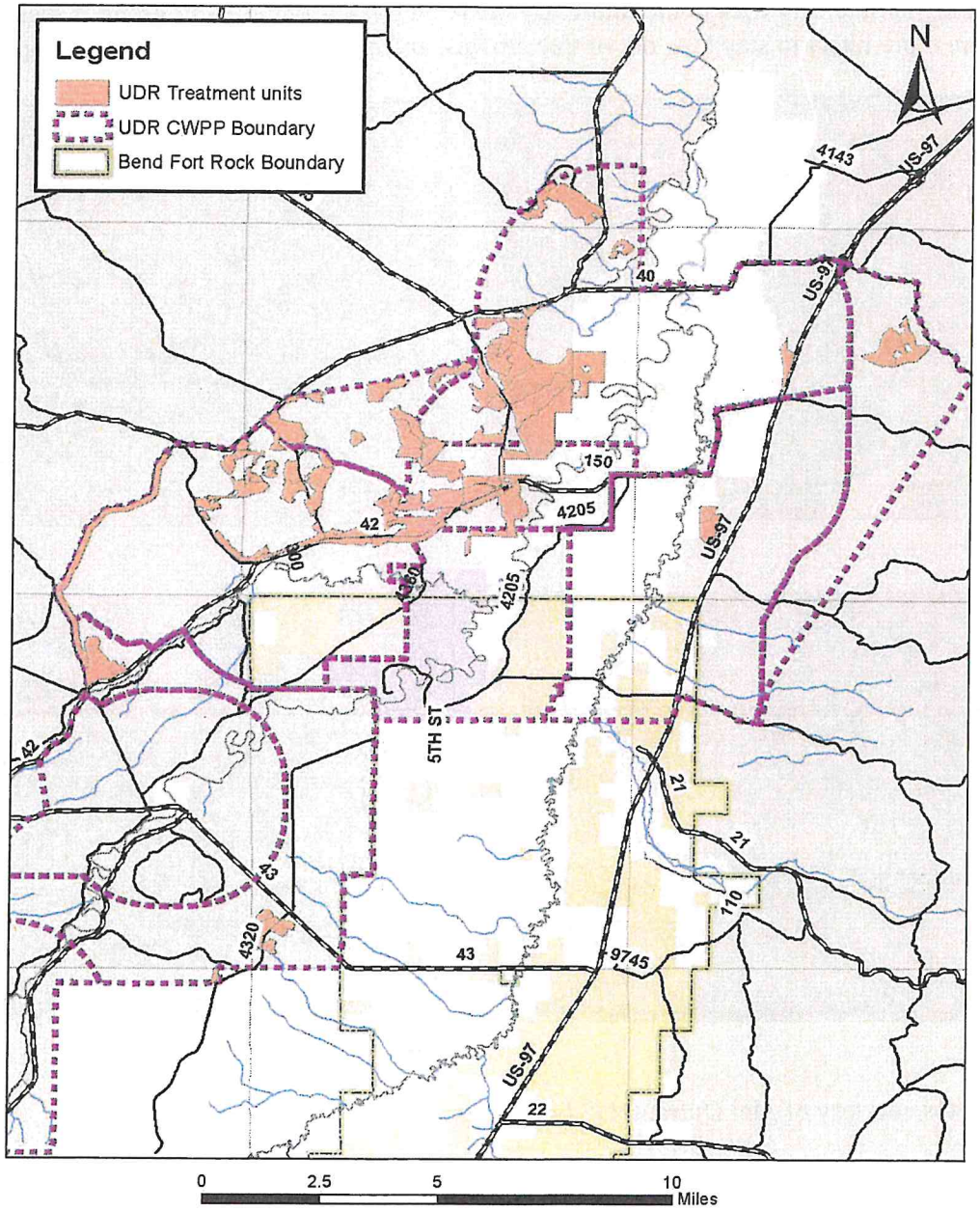
Table 1 – Planned US Forest Service Projects on Public Lands

Project Name & Start Date	Grand Total Acres	Mastication	Thinning	Piling of Fuels	Under burn	Site Prep for Natural Regeneration
Junction	**11,975**	809	1,528	4,350	4,644	664
Lavacast	**609**	164	0	0	445	0
Myst	**431**	0	0	0	431	0
Sheild Insect and Disease Project	**451**	0	226	0	0	226
UDR Fuels Reductio n HFRA	**1,782**	0	1026	498	258	0
Fall EA	**358**	358	0	0	0	0
Katalo EA	**441**	328	0	0	114	0
TOTAL	**16,047**	**2,990**	**2,780**	**4,848**	**5,892**	**890**

The following map shows current and planned projects in the UDRC planning area.

US Forest Service Project Map

USFS Ongoing Implementation within the UDR CWPP



The following photos were taken before and after a prescribed fire on public lands immediately adjacent to the Spring River Community at Risk in 2011. This underburn was conducted as part of the Katalo project noted above. The Steering Committee includes them here as an example of successful treatments on the landscape adjacent to private properties. The photos reveal the impact of low intensity fire applied on the landscape to reduce ladder fuels under trees thereby reducing the risk of higher intensity fires in the future. By breaking up the continuity of grounds fuels, future fires are more likely to stay low, out of tree crowns, and allow for faster and easier suppression.

Before

After

Before

After

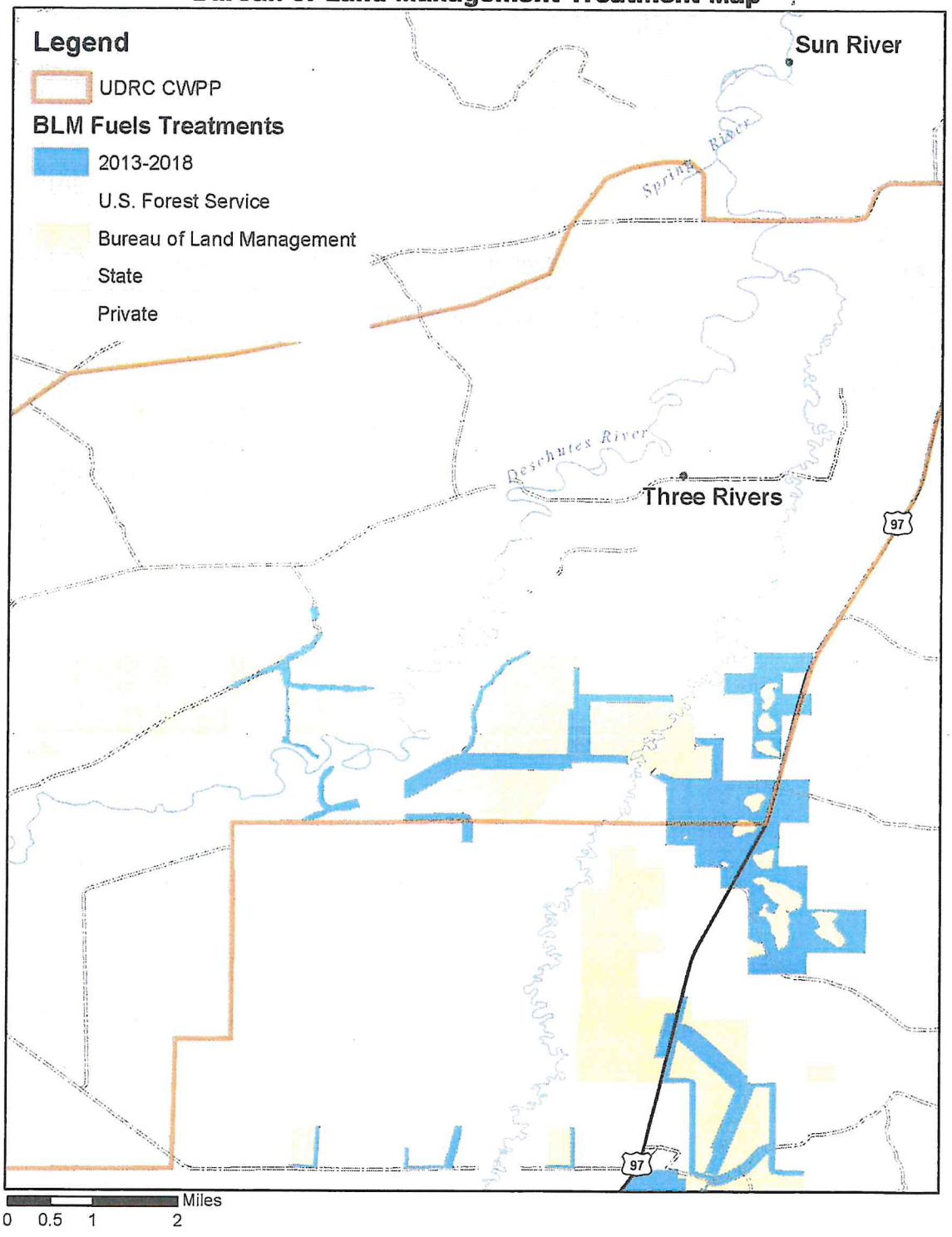
All photos courtesy of Mel Durrant, US Forest Service.

Table – Current Bureau of Land Management Projects on Public Land

Project Name	Total Acres	Treatment Type	Status	Completion Date
Prairie Slashbusting	104	Mowing/Mastication	Complete	2018
Prairie Thin & Pile	71	Small tree thinning & piling	Complete	2018
La Pine Maintenance	18	Small tree thinning & piling	Complete	2018
Prairie Thinning & Biomass removal	1673	Commercial Thinning	Complete	2017
State Rec Road Thinning	133	Thinning & Piling	Complete	2017
Masten & Foster Rd. Mowing	311	Mastication/Mowing	Complete	2017
La Pine State Park Egress Route	112	Mastication/Mowing	Complete	2015
La Pine Mowing	333	Mowing	Complete	2015

The following map shows current and planned BLM projects in the UDR planning area.

Burean of Land Management Treatment Map



Oregon Department of Forestry

The Oregon Department of Forestry works with larger landowners on a cost share basis to reduce hazardous fuels and the potential for losses on larger tracts of land. Over the last five years, ODF has worked with multiple private landowners within the UDR CWPP boundary. A total of 86.2 acres has been treated. ODF is working from two funding sources to continue hazardous fuel reduction in the Upper Deschutes River area. ODF is also the program administrator for the Oregon Forestland-Urban Interface Fire Protection Act of 1997, also known as Senate Bill 360.

Oregon Forestland-Urban Interface Fire Protection Act of 1997

The Oregon Forestland-Urban Interface Fire Protection Act, also known as Senate Bill 360, enlists the aid of property owners toward the goal of turning fire-vulnerable urban and suburban properties into less volatile zones where firefighters may more safely and effectively defend homes from wildfires. The law requires property owners in identified forestland-urban interface areas to reduce excess vegetation around structures and along driveways. In some cases, it is also necessary to create fuel breaks along property lines and roadsides.

A classification committee identifies forestland-urban interface areas in each county. Once areas are identified, a committee applies fire risk classifications to the areas. The classifications range from "low" to "high density extreme," and the classification is used by a property owner to determine the level of hazardous fuel reduction that needs to be established on the property to minimize risk of experiencing structural property loss from unwanted wildfire.

The process of identifying forestland-urban interface areas follows steps and definitions described in Oregon Administrative Rules. Briefly, the identification criteria include:

- Lands within the county that are also inside an Oregon Department of Forestry protection district.
- Lands that meet the state's definition of "forestland."
- Lands that meet the definition of "suburban" or "urban"; in some cases, "rural" lands may be included within a forestland-urban interface area for the purpose of maintaining meaningful, contiguous boundaries.
- Lots that are developed, that are 10 acres in size or smaller, and which are grouped with other lots with similar characteristics in a minimum density of four structures per 40 acres.

The classification committee was to reconvene every five years to review and recommend any changes to the classifications. This process was completed and approved in February 2010. At the same time, Deschutes County elected to classify *all* the lands within its boundaries, regardless of ODF protection.

A detailed description of the standards is available from the Oregon Department of Forestry in the handbook for the Oregon Forestland – Urban Interface Fire Protection Act of 1997. This information is also available at www.oregon.gov/ODF/fire/SB360.

The Standards for properties classified as **high** under the Oregon Forestland – Urban Interface Fire Protection Act of 1997 are:

- Establish a primary fuel break of 30 feet around structures (additional 20 feet if flammable roofing material is present);
- Create fuel breaks around driveways longer than 150 feet;
- Remove tree branches within 10 feet of chimneys;
- Remove any dead vegetation that overhangs a roof;
- Remove flammable materials from under decks and stairways;
- Move firewood 20 feet away from structures;

If the property is classified as **extreme**, a total of 50 feet of defensible space around structures is required (an additional 20 if flammable roofing is present).

A fuel break consists of: Removal of dead/dry/flammable brush around home, roof, chimney, decks and under nearby trees; removal of low hanging branches on trees; and reposition of wood piles at least 20 feet away from home during fire season.

If the property is classified as **high density extreme**, a total of 50 feet of defensible space around structures is required (an additional 20 if flammable roofing is present).
A fuel break consists of: Removal of dead/dry/flammable brush around home, roof, chimney, decks and under nearby trees; removal of low hanging branches on trees; and reposition of wood piles at least 20 feet away from home during fire season. Vacant lots should put in a 20 foot fuel break around the perimeter of the property in areas that are classified as high density extreme.

Each of the seven Communities at Risk in the UDR CWPP has one or more corresponding classification ratings under Senate Bill 360. The ratings among the seven Communities at Risk include High, Extreme and High Density Extreme.

The specific recommendations under Senate Bill 360 for private lands are also outlined under Prioritized Hazard Reduction Recommendations and Preferred Treatment Methods in this CWPP.

Deschutes County

In 2004, Deschutes County hired a County Forester to manage the County's land stock and work collaboratively with adjacent land managers and stakeholders including private citizens, the US Forest Service, the Bureau of Land Management, Oregon Department of Forestry and Project Wildfire to reduce the potential for catastrophic fires that impact Deschutes County citizens. The County Forester has made huge strides in those efforts including working with Oregon Department of Forestry to classify all lands within the County under the Oregon Forestland-Urban Interface Fire Protection Act.

Project Wildfire

Over the last five years, Project Wildfire in cooperation with Deschutes County, has secured grant funding to help residents reduce hazardous fuels on private lands. In order to stretch the grant money as far as possible, Project Wildfire utilizes the Sweat Equity Program whereby residents create or maintain defensible space on their property; bring the woody debris to the roadside and the grant funding pays to have it hauled away at no charge to the resident. The benefit of this program is not only the treatment of hazardous fuels, but the education and resident "buy-in" that are occurring at the individual resident and neighborhood levels. Through Sweat Equity projects in the Upper Deschutes River area Deschutes County and Project Wildfire have treated approximately 660 acres.

In partnership with Deschutes County, Project Wildfire plans and implements two FireFree events every year in the spring and the fall. The spring days are completely free for residents to drop off yard debris at landfills and transfer stations throughout Deschutes County. The public has come to expect these FireFree events and there is a high level of participation each year. The events are an easy and cost effective way for homeowners to create and maintain their defensible space.

Firewise Communities USA

The Firewise Communities USA program is a national recognition program which highlights communities that have chosen to complete and maintain defensible space; ensure adequate access, water and signage; promote ongoing fire prevention education, and build or retro-fit structures with non-combustible building materials such as siding, decks and roofing. Oregon Department of Forestry is the statewide liaison for the Firewise Communities USA program and in coordination with Project Wildfire, is leading the charge to identify and assist neighborhoods in their Firewise and FireFree endeavors.

The Fall River Estates neighborhood became Oregon's first Firewise Community in 2005. Since then, there have been the development of 7 Firewise Communities within the CWPP boundary with the addition of Crosswater, Caldera Springs, Spring River, Fall River, Oregon Water Wonderland 1, River Meadows, and Wild River. The Firewise Communities program recognizes communities who have demonstrated their commitment to wildfire preparedness. Through these steps, the Firewise Communities in the CWPP planning boundary have effectively lowered their wildfire risk. They

have fostered collaboration between neighbors, increased awareness and their communities' ability to respond to wildfire.

Fire Adapted Communities (FAC)

This CWPP contributes to the over-arching framework and goal of the national Fire-Adapted Communities (FAC) program. The FAC program acknowledges that people and nature are increasingly threatened by fire, despite fire's natural, beneficial role. At the same time, firefighting costs are escalating and diverting money away from proactive land management. The solution is to make natural areas and communities more fire-ready so that fire can be allowed to play its natural role at a meaningful scale. This program is in direct alignment with the Cohesive Strategy goal of creating more fire adapted communities.

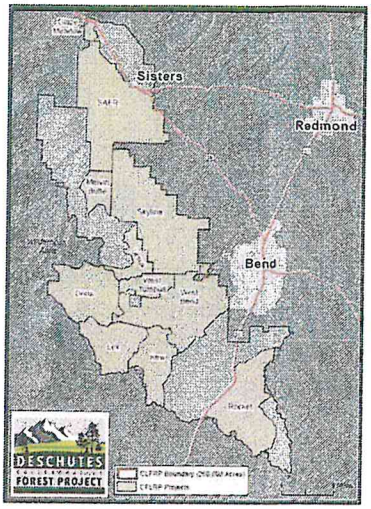
The Fire Adapted Communities (FAC) initiative and the FAC Learning Network are also helping homeowners, communities and land managers in fire-prone areas prepare for inevitable fires -- to "live with fire" safely. Deschutes County is recognized as a pilot community in the Fire Adapted Communities Learning Network. This network encourages the development and sharing of best practices and innovations in order to accelerate the adoption of fire adapted community concepts nationwide.

A fire-adapted community acknowledges and takes responsibility for its wildfire risk, and implements appropriate actions at all levels. Actions address resident safety, homes, neighborhoods, businesses and infrastructure, forests, parks, open spaces and other community assets. There is no end-point in becoming a fire-adapted community. Sustaining, growing and adapting strategies, partnerships and capacity through time are key. Visit Fire Adapted Communities Learning Network for more information.

Collaborative Forests Landscape Restoration Act – Deschutes Collaborative Forest Restoration Project

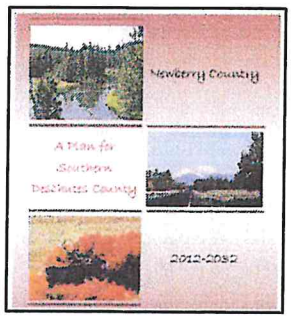
In 2010, a collaborative group of local agencies and organizations formed a proposal for funding a large, collaborative forest restoration and hazardous fuels reduction project on public lands managed by the Deschutes National Forest. This landscape level project is known as the Deschutes Collaborative Forest Project (DCFP). Under the federal Collaborative Forest Landscape Restoration Act (CFLRA), the proposal was approved for funding up to $10 million over the next ten years. The Steering Committee and several task-oriented sub-committees now provide input and recommendations to the Deschutes National Forest for projects located on the 257,000 acre landscape. The entire project spans the west side of the Greater Bend WUI, the western portion of the East & West Deschutes County CWPP boundary, and is also included in the Sisters CWPP boundary to the north and the Sunriver CWPP boundary to the south. An amendment to the original boundary was added in 2013 to include additional landscape acreage near Sunriver.

As restoration projects on this landscape are implemented, the prescriptions and guidelines identified in this CWPP will be met marking a significant treatment of wildland hazardous fuels on a landscape scale, a priority in each of the CWPPs in Deschutes County. This will also allow for the creation and realization of fire adaptive communities along much of the west side of the county.



The Deschutes Collaborative Forest Project now has a website in place – www.deschutescollaborativeforest.org – along with a social media presence on Facebook to continue the stakeholder dialogue and educational outreach for this important landscape.

Newberry Country: A Plan for Southern Deschutes County



Deschutes County has amended its Comprehensive Plan to formally recognize an area specific plan titled *Newberry Country: A Plan for Southern Deschutes County*. The Plan encompasses the rural areas south of Lava Butte except Sunriver and the City of La Pine, which are governed separately. It addresses the area's unique assets, local values and preferences for growth and development, the environment, natural hazards, transportation and more.

The plan provides a framework for implementing a vision for building a stronger, more resilient rural community in Southern Deschutes County by managing growth to 2032. It recognizes the realities facing rural Deschutes County, while acknowledging what governments can and cannot influence. It is part of the County's Comprehensive Plan, but has more geographically specific goals and policies. It also contains a vision statement conveying the expectations of South County residents for the future, an inventory of existing conditions in the area, and the results of the public involvement process. It was developed with significant public input and calls for collaboration among all sectors: government, businesses, non-profits, and residents to achieve a shared vision. The plan can be found here: Newberry Country Plan.

Private Landowner Accomplishments

Since the implementation of the original Upper Deschutes River CWPP, lot owners have made tremendous strides in reducing the potential for catastrophic losses on private lands. Working with Deschutes County and Project Wildfire, they have participated in fuels reduction projects, FireFree and Sweat Equity programs annually. The UDRC regularly updates participation in these programs to document success and the need for ongoing maintenance on private lots within the planning area. The UDRC has secured approximately $33,000 in matching grants to provide to residents in the CWPP Planning Boundary. Fuels reduction on 46 lots has been accomplished by landowners through the UDRC roadside chipping and defensible space reimbursement programs.

Community Base Maps

Utilizing the best available information and data from the US Forest Service, Oregon Department of Forestry, the Fire Learning Network and Deschutes County databases, the Steering Committee relied on the following maps and GIS data to complete the risk assessment process:

- UDR CWPP WUI boundaries with identified Communities at Risk
- 2018 Deschutes County tax lot and population data

For updated planning purposes, the Steering Committee referenced this data and relied on recent activities and fuels treatment projects in specific Communities at Risk.

This information is located in Appendix A.

Wildland Urban Interface Description

Generally, wildland urban interface (WUI) can be defined as any developed areas where conditions affecting the combustibility of both wildland and built fuels allow for the ignition and spread of fire through the combined fuel complex. The Healthy Forests Restoration Act defines wildland urban interface (WUI) as an area within or adjacent to an at-risk community that has been identified by a community in its wildfire protection plan. For areas that do not have such a plan, it is identified as:

- extending ½ mile from the boundary of an at-risk community,
- extending 1½ miles from the boundary of an at-risk community when other criteria are met such as a sustained steep slope or a geographic feature that creates an effective firebreak, or is classified as Condition Class 3 land,
- adjacent to an evacuation route.

The Steering Committee reviewed the overall WUI boundary and approved its use in this update (see Appendix A). The southern edge of the boundary is the northern boundary of the Greater La Pine CWPP. The northern boundary is the southern boundary of the Greater Bend and Sunriver CWPP boundaries. The west and east side of the boundary is met by the East West CWPP. Every acre in Deschutes County is covered by a CWPP.

In all seven (7) identified sub regions, the WUI boundary meets the CWPP planning area boundary. For the purposes of this plan, the wildland urban interface (WUI) boundary and the CWPP planning area are the same geographical region. The Upper Deschutes River wildland urban interface boundary is approximately 102 square miles and covers 65,510 acres.

The Healthy Forest Initiative (HFI) and the Healthy Forests Restoration Act (HFRA) define a "community at risk" from wildland fire as one that:

- is a group of homes and other structures with basic infrastructure and services in or adjacent to federal land;
- has conditions conducive to large-scale wildland fire; and
- faces a significant threat to human life or property as a result of a wildland fire.

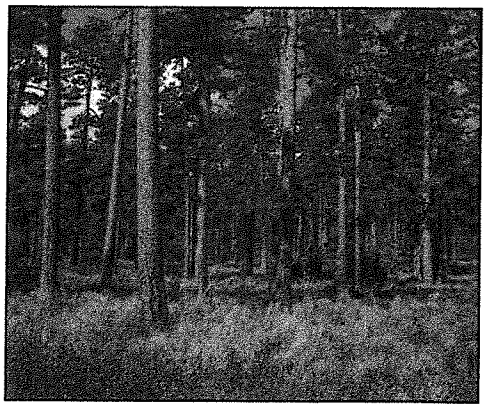
The Steering Committee has carefully planned and mapped the WUI for all the communities in the CWPP planning area (Appendix A). The WUI for this CWPP extends along the communities from the southern boundary of Sunriver, upstream along the Deschutes River to just below Wickiup Reservoir. The UDR CWPP boundary covers 66,440 total acres. For the purposes of this plan, the wildland urban interface (WUI) boundary and the CWPP planning area are the same geographical region.

Fuel Hazards and Ecotypes

The majority of the vegetation in the planning area includes:

- Ponderosa pine
- Lodgepole pine
- Bitterbrush
- Riparian areas

Ponderosa pine is currently found throughout the UDR planning area. Historically, ponderosa pine forests contained more understory grasses and sporadic shrubs than are present today. These plants combined with fallen pine needles, formed fast-burning fuels that led to recurrent widespread burning. Frequent low-intensity ground fires that occurred every 11-15 years characterized the fire regime for ponderosa pine. The pattern of low ground fires and stand dynamics resulted in the open park-like conditions that early inhabitants and visitors found in the region.



Less stand management, logging activity and highly effective wildland fire suppression, have significantly altered the ponderosa pine forest type. Removal of the larger "pumpkin" pines has dramatically decreased clumpy open forests, replacing them with more evenly spaced and smaller, younger "black-bark" forests. Similar to other species of conifer forest types, the suppression of fire has greatly increased the stocking levels and density of trees, creating ladder fuels and putting the stands at risk of attack from insects and disease. These factors have contributed to more intense fires in ponderosa pine forests in recent years.

Mature **lodgepole pine** in central Oregon is characterized by dense, uniform stands, an absence of other species, and a general lack of understory shrubs (although bitterbrush is often found with

mature lodgepole pine). Lodgepole pine forests exhibit a moderate severity fire regime with a fire return interval between 60 and 80 years. Fire in lodgepole pine stands can be low, moderate, or severe over time and often result in full stand replacement.

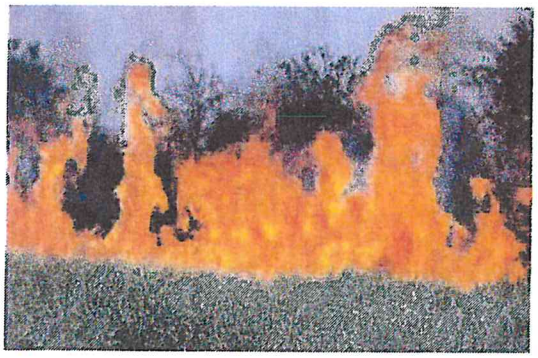
In addition to fire, mountain pine beetles are worth noting as a significant disturbance agent as the two processes are linked. The fire cycle in lodgepole pine is 60-80 years and occurs as follows: a stand replacement fire leads to stand regeneration ➔ Dead snags from the fire fall to the forest floor and fuels begin to accumulate ➔ Windstorms blow more trees to the ground ➔ Forest fires burn some of the downed logs and lead to heart rot in the standing trees ➔ The heart rot stresses the stands and makes it vulnerable to attack by the mountain pine beetle ➔ A major outbreak of the mountain pine beetle causes significant mortality and soon the conditions are ripe for another stand replacement fire.

Bitterbrush occurs throughout the planning area on all aspects and elevations and is frequently found with mature lodgepole pine. Fire severely damages bitterbrush, especially if rain is not received shortly after a burn. Bitterbrush is fire dependent, but not fire resistant. It regenerates mostly from seed after a fire and often sprouts from caches of seeds made by rodents. Bitterbrush will sprout after burning regardless of the severity of the burn and matures relatively quickly. Consequently, the planning area is rich with patches of bitterbrush that burn well on their own and provide fire-ready ladder fuels for taller tree stands.

A **riparian area** is defined as the strip of moisture-loving vegetation growing along the edge of a natural water body. The exact boundary of the riparian area is often difficult to determine because it is a zone of transition between the water body and the upland vegetation. With four river flows within the WUI area, riparian areas are of great concern from the wildland fire perspective. Vegetation types in these riparian areas vary and include trees, shrubs, grasses, forbs and willows. The primary exposure from a wildland fire perspective is during the spring before "green up" has occurred and autumn when the vegetation has cured and is highly flammable. Riparian areas include all rivers and tributaries within the planning area.

Noxious weeds and cheat grass are found across the planning area and present yearly challenges for residents, agricultural users and fire suppression agencies. Cheat grass and other noxious weeds typically occur where the ground has been disturbed to create roads, paths, or other plantings. Once established, they return perennially and can reach heights of three feet or more creating an easily ignitable fuel bed once they dry out during summer months. Fires that occur in this type of fuel spread quickly and can direct fire to other fuels such as trees or structures.

Cheatgrass provides a flammable link in the brush and forests vegetation types. It cures early in the fire season and ignites readily during dry periods because of its very fine structure that responds readily to changes in the atmospheric moisture, tendency to accumulate litter and invasive nature. Cheatgrass promotes more frequent fires by increasing the biomass and horizontal continuity of fine fuels that persist during the summer lightning season. Its expansion has dramatically changed fire regimes and plant communities over vast areas of western rangelands by creating an environment where fires are easily ignited, spread rapidly, cover large areas, and occur frequently. Fire in these habitats can have severe effects on native species of plants and animals.



Historic fire seasons occurred between July and September, with the middle to end of August being the period of the most extreme fire conditions. Cheatgrass matures by July, while most native species it replaces mature in late August. With Cheatgrass dominant, wildfires tend to occur earlier in the season, when native perennials are more susceptible to injury by burning. These fires are larger and more uniform, with fewer patches of unburned vegetation remaining within burns. Cheatgrass thrives in grounds that have been disturbed by activities such as recreation or building. There are many areas within the CWPP Boundary that have Cheatgrass invading the landscape, in some cases creating ladder fuel adjacent to homes in the WUI. Cheatgrass is recognized as a noxious weed in Deschutes County.

The result of the fuel hazards and forest types in the planning area is an overgrowth of trees, forest floor fuels and an abundance of dead or dying vegetation that contribute to a substantially elevated risk of wildland fires that are difficult to control. These overly dense conditions lead to fire behavior that produces flame lengths over eight feet with crowning, torching and ember showers that can result in stand replacement severity fires.

Not only have large, stand replacement fires not occurred, but also the more frequent low intensity fires have not been allowed to burn either. This practice of fire exclusion along with insufficient vegetation/fuels reduction has resulted in the buildup of excessive live and dead fuels.

Communities at Risk

As noted, the Steering Committee approved the existing boundaries of the Communities at Risk to identify these seven (7) Communities at Risk.

Table 3 – Communities at Risk

Community at Risk	Acreage	Structures	Estimated Population	Neighborhoods included
Three Rivers	14,765	2,046	5,115	Spring River, Crosswater, DRRH #1-5 & 9, Caldera Springs, Sundance Properties, Thousand Trails, OWW II, Vandevert Ranch, Harper, Pace Estates, Sunriver Business Park
Big River	8,082	412	1030	River Meadows, Cougar Grove, OWW I, Pitch Court, Gatehouse, Fountainbleu
Foster	4,346	280	700	River Forest Acres, Beaver Special Road District, DRRH #6, La Pine State Park
Wild River	10,301	110	275	Wild River HOA
Little Deschutes	10,984	506	1,256	Lazy River West, Lazy River/Huntington Road, Pinewood Country Estates, Sun Country Estates, Vandevert Acres, Whispering Pines, DRRH #8
Fall River	10,301	96	240	Fall River Estates
Haner Park	7,661	38	95	Haner Park
Total	66,440	3,488	8,720	33 neighborhoods

Note: The estimated population of each area is based on Deschutes County's estimate formulated as 2.5 x the number of homes.

Community Assessments of Risk

For the 2018 Upper Deschutes River Community Wildfire Protection Plan the Steering Committee relied on the Oregon Department of Forestry Assessment of Risk Factors to determine numerical value for the seven (7) Communities at Risk.

ODF Assessment of Risk Factors

The Oregon Department of Forestry Assessment of Risk Factors is based on five categories of evaluation that include a variety of information designed to identify and evaluate wildland fire risk across Oregon: risk of wildfire occurrence, hazard, protection capability, human and economic values protected and structural vulnerability. The summary of this assessment is on page 38. The individual assessments for each Community at Risk are located in Appendix B.

Risk of Wildfire Occurrence

The risk of wildfire occurrence refers to the likelihood of a fire occurring based on historical fire occurrence, home density and ignition sources. The calculations are based on the number of wildland fire starts per 1,000 acres per ten years, as well as home density and ready ignition sources like dry lightning storms, debris burning and equipment use. A score is given for each evaluation with the total scores corresponding to a level of risk in each category.

The risk is high in all Communities at Risk except Fall River which ranked moderate based on historical evidence of fire history as well as ready ignition sources like dry lightning storms, debris burning, equipment use, juveniles, campfires, and arson.

The current condition of the vegetation on the federal and private lands adjacent to and within the UDR WUI poses an elevated hazard that can lead to catastrophic loss from wildland fire. The communities of La Pine and Sunriver are also threatened by the likely possibility of a crown fire sweeping into the community, or by embers falling on the communities from an adjacent wildland fire.

Hazard

The hazard rating describes resistance to control once a fire starts based on weather, topography (including slope, aspect and elevation), vegetation and crown fire potential. As stated earlier, effective wildland fire suppression has led to the extensive buildup of overstory and ground vegetation in the WUI. **All Communities at Risk are rated high or extreme under this assessment.**

Ember showers: smoldering embers from a nearby fire that can land in gutters, roof valleys; on or under decks and siding; in vents; or on lawn furniture where they can ignite and cause damage to a home. They can travel miles and ignite spot fires far from the original fire.

With slightly less than half of the private lots in the planning area considered vacant with no structures, the Steering Committee considers this situation as an additional hazard. While some vacant lots have been treated to reduce hazardous fuels, the overwhelming majority have not been treated, posing a significant hazard to the communities in which they lie. In addition, many of the vacant lots are owned by "absentee owners" with no real attachment to the neighborhoods, thereby increasing the difficulty in engaging landowners to participate in hazardous fuels reduction activities.

The Steering Committee highlighted the Crown Fire Potential subcategory within the Hazard section to confirm its definition and how it applies in this assessment. The ODF Assessment of Risk asks for the relative crown fire potential in terms of three types of crown fire: passive, active and independent.

They are defined generally as follows:

Passive crown fire - a type of crown fire in which the crowns of individual trees or small groups of trees burn, but solid flaming in the canopy cannot be maintained except for short periods.

Active crown fire - a crown fire in which the entire strata of fuel is involved in flame, but the crowning phase remains dependent on heat released from surface fuel for continued spread. An active crown fire presents a solid wall of flame from the surface through the canopy fuel layers. Flames appear to emanate from the canopy as a whole rather than from individual trees within the canopy.

Independent crown fire - a fire that advances in the tree crowns alone, not requiring any energy from the surface fire to sustain combustion or movement. Independent crown fires are rare.

A wildland fire could start within the communities or in any of the forested areas adjacent to or surrounding the communities. With a fire of any significance, it could be difficult to quickly assemble the resources necessary to adequately address all of the fire and life safety issues that can arise in the early stages of emergency operations. The potential exists for a high intensity wildland fire for any number of reasons, during a significant portion of each year.

Protection capability

In this category, the lower the overall rating, the more protection capability the community has. The ratings are based on fire protection capability and resources to control and suppress wildland and structural fires. The ratings also consider response times and community preparedness.

Fire protection capability risk rating ranges from low to high among the Communities at risk. **The Haner Park area rated moderate risk and the remaining six communities rated low risk.** The ratings are based on fire protection capability and resources to control and suppress wildland and structural fires. The ratings also consider response times and community preparedness.

When local resources are fully engaged, all agencies can request additional resources through the State of Oregon and request federal resources through the Pacific Northwest Coordination Center.

In addition to this high level of coordination, all fire departments and agencies in Central Oregon convene each year for a pre-season meeting to discuss the upcoming wildland fire season. Topics addressed at this meeting include predicted wildland fire activity, weather forecasts and how agencies can/will respond to meet the needs of fire events.

La Pine Rural Fire Protection District

The La Pine Rural Fire Protection District provides first response structural and wildland fire coverage within its 115 square mile fire service district supported by local taxpayers. The District provides Emergency Medical Services, including Advanced Life Support paramedic transport, within a 1,000 square mile service area. A five-member elected board of directors manages the District. The District consists of 25 career and 12 volunteer reserve and student scholarship positions involved directly in fire and EMS Operations. The resident students participate in the Fire/EMS program at Central Oregon Community College. There are three administrative personnel and 12 support volunteers who provide off line support services. All firefighting personnel receive training in urban-wildland firefighting practices, structural fire protection and suppression techniques, and other related topics. The District uses the National Incident Management Systems (NIMS) Incident Command System and all personnel have received training and continue to train in its use. The District works out of three fire stations located at Huntington Road (downtown La Pine), Burgess and Day Road, and South Century Drive. It maintains a fleet of three structural fire engines, three Advanced Life Support paramedic ambulances, three heavy brush engines, three water tenders, three light brush/QRU engines, and three staff/utility vehicles.

The District is a party to the Central Oregon Fire Department Mutual Aid Agreement. In the event of a major fire the department may request assistance from all other fire departments that are signatory to the agreement. In addition to Central Oregon Fire Departments, the District cooperates with wildland fire protection agencies in the area such as Oregon Department of Forestry, Walker Range, US Forest Service, and the Bureau of Land Management.

Oregon Department of Forestry (ODF)

Within the planning area, the Central Oregon District of the Oregon Department of Forestry (ODF) protects private forestland. ODF provides wildland fire response for fires burning on, or threatening private forestlands paying a Forest Patrol Assessment. There are some areas within the WUI

Boundary that receive dual protection from ODF and the Fire Districts because they are located within the rural fire protection district and are also classified as private forestland within the ODF district. In those cases the fire district provides initial response and transfers fire command to ODF upon their arrival.

During fire season, typically June through October, ODF provides ten engines, one five-person hand crew and one dozer, all are available for initial attack response in the Prineville-Sisters unit. Statewide resources are also available to ODF including initial attack hand crews, dozers, water tenders, helicopters, air tankers, and overhead staff positions, depending on statewide needs. During fire season these resources are in high demand and may not always be available. In addition to Oregon Department of Forestry suppression capabilities, ODF cooperates with wildland fire protection agencies in the area including La Pine Rural Fire Protection District, Walker Range Fire Protection Association, the US Forest Service, and the Bureau of Land Management.

USDA Forest Service and USDI Bureau of Land Management

The Forest Service and Bureau of Land Management (BLM) provide wildland fire protection on the federal lands within the Upper Deschutes River planning area. Together, with the Forest Service (USFS), they are identified as the Central Oregon Fire Management Service (COFMS). COFMS includes the Deschutes National Forest, the Ochoco National Forest, the Crooked River National Grassland, and the Prineville District of the BLM. These four units are managed cooperatively under combined leadership, with an Interagency Fire Management Officer, two Deputy Fire Management Officers, and a Board of Directors including decision makers from both agencies, with Forest Service District Rangers and BLM Field Managers. COFMS has a central dispatching facility in partnership with the Oregon Department of Forestry that serves as a Coordination Center for fire and fuels operations, as well as safety and training issues for COFMS.

In total, COFMS provides the following resources: 26 engines, six initial attack hand crews, six prevention units, two dozers, two water tenders, one Type 3 helicopter, 35 smoke jumpers, two interagency Hotshot Crews (Redmond & Prineville), one Type 2 helicopter with 20 rappellers, one Type 1 helicopter, Central Oregon Dispatch Center (COIDC), Redmond Air Center, an air tanker base, a regional fire cache and required overhead staff positions. During fire season these resources are in high demand and may not always be available. Anytime an incident grows beyond the capability of the local resources a request may be made to ODF and to the Pacific Northwest Coordination Center for additional wildland fire fighting resources.

Law Enforcement

Police services are provided by Deschutes County Sheriff in the Upper Deschutes River Area. The Sheriff's Department has responsibility for ensuring the safe and orderly evacuation of the community in the event of a major emergency. A number of resources have been allocated to accomplish this task including hi/lo sirens on vehicles; emergency notification via radio and television; reverse 9-1-1 capability; Sheriff's Department staff; La Pine Rural Fire Protection District staff and community-wide volunteers. The Countywide Disaster Plan and the County Department of Emergency Services address any other issues relative to a major emergency.

In addition to this high level of coordination, all fire departments and agencies in Central Oregon convene each year for a pre-season meeting to discuss the upcoming wildland fire season. Topics

addressed at this meeting include predicted wildland fire activity, weather forecasts and how agencies can and will respond to meet the needs of fire events.

Oregon State Police assists the local law enforcement efforts and cooperates with Deschutes County for protection in this area.

Community Preparedness

Also under the category of Protection Capabilities, the ODF Assessment of Risk examines a community's level of organization and preparedness to respond in an emergency situation. The assessment considers whether the area has an organized stakeholder group that looks out for its own area through mitigation efforts, a phone tree, etc. Or, does the area only receive outside efforts such as newsletters, mailings or fire prevention information from other groups? In the Upper Deschutes River WUI, the Communities at Risk varied from having a high level of organization to not having any with most efforts made by outside agencies such as the fire department's FireFree efforts and Project Wildfire's Sweat Equity projects in individual neighborhoods. The Steering Committee used local knowledge to determine the level of preparedness.

The **American Red Cross** offers a gamut of tools to boost community preparedness such as community presentations on emergency preparedness kits. The Red Cross gives presentations to church groups, HOAs, citizen groups, etc. Red Cross plays a vital in emergency response during large wildfire events and in the recovery post fire. At any time of day or night, trained Red Cross volunteers respond to the scene of structural or wildland fires and provide food, shelter, and emotional support to those affected.

Values Protected

The human and economic values protected in the UDR CWPP planning area are also at risk with **Three Rivers in the high category; Little Deschutes, Big River, and Fall River in the moderate category; and Wild River, Foster, and Haner Park communities in the low category.** These ratings are based on home density per ten acres and community infrastructure such as power substations, transportation corridors, water and fuel storage, etc.

Based on Deschutes County tax records, there are approximately 3,488 structures in the UDR WUI, with an appraised real market value of $1,419,237,805 including land and improvements.

The essential infrastructure includes multiple webs of utilities, roads, water and sewer systems and has an approximate replacement value of $275,000 per mile for electrical transmission lines; $150,000 per mile of electrical distribution lines; and $2 million per electrical sub-station. Loss to roads, water and sewer systems would likely be minimal in the event of a fire because most are underground or otherwise not flammable.

The US Forest Service and Oregon State Department of Fish and Wildlife have designated two sections of the WUI boundary as key elk habitat for the Ryan Ranch and Fall River elk herds. A noted deer migration route also traverses the CWPP boundary.

Other Community Values

Also falling within the planning area is a portion of the Upper Deschutes River that is classified by the state as a State Scenic Waterway. The same area is also considered protected under the Federal Wild and Scenic Rivers Act. With outstanding scenic, recreational, cultural, geologic, wilderness, fish and wildlife, historical and botanical values, residents place high importance on providing for the long-term fire safety and maintenance of these values.

A business resiliency study conducted by FEMA in 2012 presents statistics for small businesses that have been impacted by a natural disaster such as a large wildfire. All of the statistics apply to those businesses that did not have a business continuity plan or an emergency plan:

- 43% of companies never reopened.
- 51% of companies closed within 2 years.
- 80% of companies that do not recover from a disaster within one month are likely to go out of business.
- 75% of companies without a business continuity plan fail within three years of a disaster.
- Companies that aren't able to resume operations within ten days (of a disaster hit) are not likely to survive.
- Of those businesses that experience a disaster and have no emergency plans, 43% never reopen; of those that do reopen, only 29% are still operating two years later.

A large wildfire can have lingering effects that last for months and the largest impacts lasting for at least a month. With much of the local economy tied to small local businesses that depend on the local surrounding forest environment, the consequences of a wildfire that closed major recreation and tourist opportunities would be catastrophic. Business resiliency of the local small businesses is a critical piece in creating a more fire adapted community. Based on a statewide economic impact study of the spending losses to the travel and tourism industry due to wildfires in 2017, Deschutes County lost an estimated $16 million. Specific action items for business owners are located in the Action Plan.

The loss of recreational use by visitors to the area as a result of scenic quality, specifically large "burn over" areas, will have an unknown economic impact not only to the area, but to the remainder of Deschutes County and neighboring cities like Bend, La Pine, Sunriver, and Sisters. If a large wildland fire occurs in this area, the result will be catastrophic loss to both the developed and dispersed recreational opportunities in the greater Upper Deschutes River area.

Structural Vulnerability

Although attitudes and behaviors towards fire are changing in Central Oregon thanks to educational programs like FireFree and Firewise, the population growth and continued development into the wildland urban interface present fresh challenges each year. The Steering Committee places high value on the importance of making structures and neighborhoods in the WUI as fire safe as possible.

The Steering Committee addressed structural vulnerability based on a combined approach including the National Fire Protection Association (NFPA) 1144 survey and the ODF Assessment of Risk

standards. The survey revealed that while some areas have taken great strides towards improving the structural ignitability of homes, others have a great deal yet to do.

The Foster Road Communities at Risk ranked in the moderate category while the Three Rivers, Wild River, Haner Park, Big River, Little Deschutes, and Fall River Estates Communities at Risk ranked in the low category.

The following table is a summary of the Communities at Risk, the value ratings (with corresponding scores) and the total scores for each community in each category. The higher the total score in this assessment, the higher the overall risk. The full assessments on each Community at Risk are located in Appendix B.

Risk: Describes the likelihood of a fire occurring based on historical fire occurrence, and ignition sources. Low = 0 – 13 points; Moderate = 14 – 27 points; High = 28 – 40 points.

Hazard: Describes resistance to control once a fire starts based on weather, topography, and fuel. Low = 0 – 9 points; Moderate = 10 – 40 points; High = 41 – 60 points; Extreme = 61 – 80 points.

Protection capability: Describes fire protection capability and resources based on type of protection, response times, and community preparedness. The lower the score here, the better the risk factor. Low = 0 – 9 points; Moderate = 10 – 16 points; High = 17 – 40 points.

Values protected: Describes the human and economic values in the community based on home density per ten acres and community infrastructure such as power substations, transportation corridors, water, and fuel storage, etc. Low = 0 – 15 points; Moderate = 16 – 30 points; High = 31 – 50 points.

Structural vulnerability: Describes the likelihood that structures will be destroyed by wildfire based on roofing and building materials, defensible space, separation of homes, fire department access, and street signage. Low = 0 – 30 points; Moderate = 31 – 60 points; High = 61 – 90 points.

Table 3 – ODF Assessment of Risk Summary

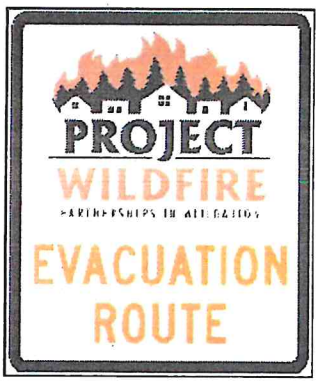
Community at risk	What is the likelihood of a fire occurring?	Hazard rating	Protection capability	Human and economic values protected	Structural vulnerability	Total score	Rank
Little Deschutes	High 30	Extreme 64	Low 3	Moderate 22	Low 27	146	**1**
Foster	High 30	High 60	Low 7	Low 12	Moderate 33	142	**2**
Three Rivers	High 35	High 57	Low 2	High 35	Low 13	142	**3**
Haner Park	High 30	Extreme 62	Moderate 12	Low 12	Low 25	141	**4**
Big River	High 30	Extreme 64	Low 1	Moderate 22	Low 7	124	**5**
Fall River	Moderate 20	High 57	Low 0	Moderate 22	Low 12	111	**6**
Wild River	High 30	High 50	Low 0	Low 12	Low 10	102	**7**

Areas of special concern

Critical Transportation Routes

Critical Transportation Routes do not have a standard definition in Deschutes County. For purposes of this CWPP, the Steering Committee defines Critical Transportation Routes as:

- all routes necessary for the support of routine flow of commerce to and/or through the greater planning areas,
- all routes that could be used for potential evacuation of citizens and/or visitors from a wildland fire threat to public safety,
- routes needed for emergency ingress and egress to a wildland fire incident, not including unimproved or "two-track" roads,
- and, all routes needed to protect and support critical infrastructure (power substations, communication transmission lines, water and fuel storage, public service facilities, recreation facilities, etc).



A detailed look at specific ingress/egress issues for each WUI area is included under Recommendations to Reduce Structural Vulnerability. This issue is also highlighted under Action Plan and Implementation.

Deschutes County estimates that there are thousands of additional transient population who visit recreation sites and utilize the transportation corridors in these planning areas. Critical transportation routes are of prime concern for those agencies responsible for fire suppression and evacuation.

The Steering Committee is also concerned with the lack of maintained roads leading in and out of the high risk areas in the WUI. Should an evacuation be necessary, the Steering Committee expressed great concern over the number and quality of the evacuation routes. Many of the egress routes are dirt roads that contribute to substantial dust and debris clouds as vehicles attempt to use them. During the summer months, after a few cars travel a road, the dust is so dense that it is not safe for vehicles to continue using the road until the dust settles. Lack of maintenance has led to deteriorated road surfaces with large potholes, ruts and washboards that slow evacuation efforts and cause some vehicles to break down, further complicating a mass departure from the area. The current condition of some of the evacuation routes is a significant life safety issue.

Working with Deschutes County and Project Wildfire, neighborhoods within the Communities at Risk have taken advantage of a signage program to increase visibility of evacuation route signs along roads. The signs are made from high intensity reflective material and indicate proper exit routes from these neighborhoods.

The Steering Committee underscored the need to continue to identify, develop and protect critical transportation routes as part of this planning process. Ingress/egress issues are included under

Recommendations to Reduce Structural Vulnerability. This issue is also highlighted under Action Plan and Implementation.

Resident Evacuation Preparation

The Steering Committee emphasized the critical need for residents in the CWPP Boundary to take steps to prepare themselves for an evacuation event. One of the most important items residents can do is register their cell phones to receive emergency alerts from the Deschutes County Sheriff's Office. If the emergency responders can reach the residents, they can't provide updates on local emergencies. To sign up, search for Everbridge Deschutes County and follow the steps, this should not take more than a few moments.

Local law enforcement officials follow the same evacuation protocols. Residents should be aware of the evacuation levels and their implications. For more information on how to prepare you and your family visit projectwildfire.org/evacuation.

Level 1: Be Ready

There is an incident in your area and residents should be aware of potential evacuation. Be aware of the danger, monitor emergency services sources and local media for information. Those persons who will need additional time to exit an area or have health conditions (especially respiratory conditions that could be made worse by smoke) should consider leaving. You are encouraged to prepare or even move livestock and pets out of the area. Be prepared to leave if conditions worsen.

Level 2: Get Set

There is significant danger in your area and residents should be prepared to leave at a moment's notice. You are encouraged to leave and should do so as soon as possible. If you choose to stay, you should be able to leave immediately if conditions worsen. You MAY have time to gather necessary items, but doing so is at your own risk. Entry to evacuated areas may be denied until the hazard subsides.

This may be the only notice you receive. Emergency services cannot guarantee we will be able to notify you if conditions rapidly deteriorate.

Level 3: Go Now!

There is immediate and imminent danger and you should evacuate immediately. **DO NOT DELAY LEAVING** to gather any belongings or make efforts to protect your home. Leave immediately and as quickly as possible. Drive carefully, turn on your headlights, and follow any directions from emergency services personnel. Entry to evacuated areas will be denied until the hazard subsides.

Water

Some of the Communities at Risk in the WUI areas have significant fire response times and rely on water transported to the scene for fire suppression. This presents significant challenges in the event of a wildland fire as there are limited water resources for fire suppression or protection. Adequate

water resources were not considered in the assessment. This topic is addressed as a future item under Action Plan and Implementation.

Hazardous vegetation along railroads

The Steering Committee expressed concern over the condition of the vegetation in the railroad right of way in those Communities at Risk that the railroad transects. In some areas, the railroad right of way extends 100 feet from the center of tracks on both sides of the rails. In the past, trains traveling in the area have ignited dry weeds along the railways. In addition to the size of the railroad right of way is the amount and type of flammable vegetation. In some cases, the right of way is thick with sage, bitterbrush, cheat grass and noxious weeds – all acting as ladder fuels to the trees that share the right of way. Sheer size along with the amount and type of vegetation can lead to a large fire with high spreading potential to nearby homes and neighborhoods already at risk.

While the vegetation management of the railroad right of ways has improved in recent years, the Steering Committee strongly recommends encouraging Burlington Northern Santa Fe Railroad Corporation to maintain weeds below 4" to deter the spread of any potential fires.

Transient Population

The Steering Committee highlighted the issue of a consistent transient population and camping as both an ignition and evacuation risk. The fire agencies reported numerous fire starts that occurred in this area could be attributed to the presence of a transient population. The Steering Committee committed to working with local agencies and organizations to reduce the amount of illegal and transient camping in all rating areas.

Prioritized Hazard Reduction Recommendations and Preferred Treatment Methods

As maintained in the original CWPP, the Steering Committee agreed that the UDR Community Wildfire Protection Plan is a tool that can be used for many outcomes. The following is an outline of the priorities, as well as preferred treatments and goals under the UDR Community Wildfire Protection Plan.

Goals

The Steering Committee identified the following goals to meet the Purpose on page one of this CWPP. It is important to note that the UDR CWPP does not prioritize these goals over one another. The UDRC and the CWPP Steering Committee agree that they are interconnected and interdependent for success.

- Reduce hazardous fuels on public lands;
- Reduce hazardous fuels on private lands;
- Reduce structural vulnerability;
- Increase education and awareness of the wildfire threat;
- Identify, improve and protect critical transportation routes;

Preferred treatments and goals for hazardous fuels reduction

Appendix A includes detailed maps of the WUI boundary throughout the UDR CWPP and the recommended areas for treatments by reducing wildland fuel hazards on both public and private lands.

The standard of the UDR CWPP is to decrease the risk of uncharacteristic and high intensity wildland fire behavior by reducing fuel loads to that which can produce flame lengths of less than four feet. This enables safe and effective initial attack.

One of the CWPP goals is to provide for a healthy, fire resilient landscape that supports the social, economic and ecological values of area residents and visitors. The Steering Committee recognizes the effectiveness and value of maximizing treatment efforts in areas that are adjacent to federal or private projects and recommends that future projects consider these benefits when selecting areas for treatment. The following specific standards are recommended for treatments on public and private lands within the Upper Deschutes River WUI.

Public lands

All seven Communities at Risk are adjacent to public lands managed by either the Forest Service or the Bureau of Land Management. State owned lands represent only a small percentage of the lands (3%) within the planning area.

It is the intent of the Steering Committee that the UDR WUI is subject to expedited measures for hazardous fuels treatment and allocation of funds to protect the communities and neighborhoods as stipulated by the Healthy Forests Restoration Act.

The overall standard for public lands under this CWPP is to decrease the risk of high intensity wildland fire behavior by reducing and maintaining fuel loads to that which can produce flame lengths of less than four feet in the areas within the WUI boundary. This buffer will begin at the edge of private lands (except where other land management practices prohibit it such as riparian or wetland areas) and extend onto the federal lands to the designated WUI boundary. This standard can be achieved by federal land management agencies through a variety of treatment methodologies such as thinning, prescribed burning and mechanical treatments. Specific treatments should address fuels issues on a landscape scale rather than acre by acre.

Federal land managers are strongly encouraged to work toward the overall standard by restoring Condition Class 2 and 3 lands with the goal of returning the landscape to Condition Class 1. In stands where Crown Fire Potential is rated Extreme by the federal agencies the recommended standard is to reduce fuel loads to that which can produce flame lengths of less than four feet, regardless of Condition Class:

- Within a ¼ mile buffer of the UDR WUI boundary. Treatments should begin here and increase in ¼ mile increments until the WUI boundary is reached.
- Within 300 feet of any evacuation route from any of the Communities at Risk.
- Maintenance of previously treated lands is also a top priority. Treatment and maintenance of previously treated lands before treatment begins again in other places is an important component of keeping communities safe.

In general, the dominant strategy in all areas should be thinning from below, in an effort to restore large tree, open, ponderosa pine dominated forests. Federal land managers are strongly encouraged to utilize mechanical treatments and prescribed fire to reduce fuel loads to that which can produce flame lengths of less than four feet.

These treatments shall be consistent with the current COFMS Fire Management Plan on the federal lands and existing land management plans on state owned lands.

Within ¼ mile of any residential area, and within 300 feet of roads, trees should be thinned and widely spaced to protect and enhance the large trees on any given site. Ladder fuels and shrubs should be aggressively managed by mowing or prescribed burning. Lower branches should be trimmed. Additionally, it will be necessary to provide effective closures and signs to ensure these buffers are not abused by unmanaged OHV use.

The Steering Committee recommends that in the WUI farther than ¼ mile from residences, thinning from below and vegetation treatments should be done to accomplish greater diversity of forest structure, a greater variety of size and age classes, efforts to promote remaining large diameter ponderosa pine, and a selected mosaic of shrub and other vegetation to support wildlife. Throughout the WUI, forests should be thinned to an extent that leaves insufficient ladder fuels to support a fast moving crown fire.

With regard to the Upper Deschutes River Wild and Scenic River corridor, the Steering Committee is extremely concerned that this area presents some of the most dangerous forest fuel conditions in the analysis area and should be considered a high priority for treatment, as permitted under the river management plan. The Committee recommends thinning and other forest treatments using careful planning and low impact techniques. Forest management should occur in accordance with the other recommendations in this plan, as long as thinning and risk reduction activities reflect the following considerations:

- Forest management actions must be protective of riparian areas, elk and deer habitat, and vegetation and wildlife diversity;
- Compliance with agency guidelines for retaining volumes of dead and down vegetation for stream bank structure, future fishery habitat, and wildlife habitat;
- The Forest Service and BLM should consider the lowest impact harvest systems for thinning within the Wild and Scenic River Boundary.

Within the UDR WUI there are many side roads that were slated for closing as a part of the 1996 Upper Deschutes Wild and Scenic River Management Plan. Given that many of these are fire ignition sites because of smoking, remote camping, and OHV use, the Steering Committee supports current efforts to close these roads when supported by the nearest neighborhoods. Priority should be given to those areas that have a neighborhood commitment to become partners with the federal agencies and stewards of the nearby non-motorized area.

The Steering Committee also encourages federal and state land managers to work with local landowners to minimize road closures that could be used as alternate evacuation routes.

Industrial and non-industrial private forestlands

Private forestlands are generally larger land holdings managed for multiple values including timber, wildlife, recreation and water. The landowner may or may not live on the property however the property is largely forest vegetation excluding the area directly adjacent to any structures. There are still a few private forestland parcels in the UDR WUI that directly border some of the Communities at Risk. The Steering Committee recommends continued partnerships with private forestland owners that encourage fuels management to the standards above as part of an overall plan for management of the forest resource.

Industrial and non-industrial private forestland owners can meet the overall standard by treating Condition Class 2 and 3 lands with the goal of returning the landscape to Condition Class 1 by reducing fuels loads to that which can produce flame lengths of less than four feet:

- Within a ¼ mile buffer of adjacent communities at risk. Treatments should begin here and increase in ¼ mile increments until the WUI boundary is reached.
- Within 300 feet of any evacuation route from adjacent Communities at Risk.

The standard can be achieved through a variety of treatment methodologies such as thinning, prescribed burning and mechanical treatments. Specific treatments should address fuels issues on a landscape scale rather than acre by acre. These treatments shall be consistent with existing land management plans for these areas.

Private and county owned lands

Only 18% of the land (12,547 acres) in the CWPP planning area is private land and is considered developed, or in rare cases intermixed with development. The County owns approximately 187 acres in this planning area.

Private land with *or* without structural improvements

On private lands within the CWPP WUI boundary with structural improvements or those that are vacant, the minimum goal is for each property to meet the Senate Bill 360 Standards for its individual classification rating.

A detailed description of the standards is available from the Oregon Department of Forestry in the handbook for the Oregon Forestland – Urban Interface Fire Protection Act of 1997. This information is also available at www.oregon.gov/ODF/fire/SB360.

The minimum Default Standards under the Oregon Forestland – Urban Interface Fire Protection Act of 1997 (Senate Bill 360) are:

- Establish a primary fuel break of 30 feet around structures;
- Create fuel breaks around driveways longer than 150 feet;
- Remove tree branches within 10 feet of chimneys;
- Remove any dead vegetation that overhangs a roof;
- Remove flammable materials from under decks and stairways;
- Move firewood 20 feet away from structures;

In addition to the default standards, if the structure has a flammable roof and the property is classified as High, a secondary fuel break of 20 feet is required. For properties rated Extreme or High Density Extreme, the secondary fuel break must be 70 feet (for a total of 100 feet). Furthermore, all properties rated High Density Extreme are required to have a 20-foot fuel break around the perimeter of the property.

Although not included in the Senate Bill 360 standard, the Steering Committee strongly recommends a 20-foot fuel break around the perimeter of any properties rated Extreme to break up continuous fuels in the community.

Property owners can also create and/or maintain defensible space, a fire-resistant buffer that allows for effective first-response firefighting and a significantly reduced risk of the spread of fire by participating in programs like FireFree and Firewise which promote a variety of fire safe actions to help prevent the spread of fire to protect individual homes and neighborhoods.

Lots without structural improvements, or vacant lots, pose an additional challenge. Within the UDR WUI, slightly less than half of the private lots are considered vacant, or lots with no structural improvements. Many of those are owned by "absentee owners." In general, vacant lots owned by absentee owners present a specific threat to neighborhoods in that owners have little to no connections to the neighborhoods and in most cases do not recognize their responsibility to contribute to the safety of the entire neighborhood by reducing the hazardous vegetation on their properties. The risk of destructive wildland fires is thereby greater inside these neighborhoods due to the lack of owner attention on vacant lots.

Senate Bill 360 only addresses vacant lots that are afforded wildland fire protection by Oregon Department of Forestry and are classified as "High Density Extreme." *As noted above, the Steering Committee strongly recommends a 20-foot fuel break around the perimeter of any properties rated Extreme regardless of whether there is a structure on the property.*

Recommendations to Reduce Structural Vulnerability

Structural Vulnerability

There are 3,152 structures spread across this CWPP boundary. Structural vulnerability is addressed as a required evaluation under the ODF Assessment of Risk but more importantly, to assist local residents in preparing their properties against the threat of wildland fire. Based on the assessment of structural vulnerability for the ODF Assessment of Risk, Table 7 identifies the main hazards within the Communities at Risk. For each hazard or risk listed, an action is recommended to address the threat or decrease the risk.

In every instance, resident and landowner education is a primary goal. The Steering Committee recommends engaging in educational programs such as FireFree, Firewise and Senate Bill 360.

Adequate water resources for fire suppression were not considered as part of this assessment. This topic is addressed under Action Plan and Implementation.
Table 8 provides a checklist for residents seeking to reduce the risk of catastrophic losses to their homes and properties. The list is compiled from tips and suggestions from the FireFree and Firewise programs, which promote homeowner responsibility for reducing fire hazards on their property. The Steering Committee approves this combined checklist. More information about these programs can be found at www.firefree.org and www.firewise.org.

Table 7 – Recommendations to Reduce Structural Ignitability

☑	How can I reduce my home's probability of igniting?
❑	Increase Homeowner education with programs such as, FireFree, Firewise, Senate Bill 360
❑	Establish additional evacuation routes, sign & maintain evacuation routes
❑	Identify, upgrade and maintain any roads <20 feet in width
❑	Produce & install reflective signs for any non-reflective that may exist
❑	Maintain fuel reduction projects annually
❑	Re-apply for Firewise annually, if applicable

Table 8– Defensible Space Checklist

Table 8 provides a checklist for residents seeking to reduce the risk of major losses to their homes and properties.

- ☑ **What can I do to help prevent losses to my property and my neighborhood?**
- ❑ Post easy-to-read address signs so emergency crews can find your home.
- ❑ Reduce the density of nearby trees.
- ❑ Clear wood piles and building materials at least 20 feet away from your home.
- ❑ Remove low tree branches and shrubs. Trim up juniper and other trees at least 4 feet from the ground. Remove "ladder fuels" among trees.
- ❑ Keep grass and weeds cut low.
- ❑ Remove all branches and limbs that overhang roofs.
- ❑ Remove leaves & needles from gutters, roofs and decks.
- ❑ Remove dead plants and brush.
- ❑ Maintain a minimum of 30 feet of defensible space around your home.
- ❑ Screen vents and areas under decks with 1/8" metal mesh or fire resistant siding.
- ❑ Keep decks free of flammable lawn furniture, toys, doormats, etc.
- ❑ Choose fire-resistant roofing materials like metal, tile or composition shingles.
- ❑ Trim vegetation along driveways a minimum distance of 14' wide x 14' high for fire trucks.
- ❑ Choose fire-resistant plants. Visit FireFree.org to view a guide for *Fire-Resistant Plants for the Home Landscape.*
- ❑ Use alternatives to burning debris like composting or chipping.
- ❑ If burning debris - do not burn building materials.

Education

As stated in the Purpose on page one of the Upper Deschutes River CWPP, four outcomes for this planning effort are to:

- Instill a sense of personal responsibility for taking preventative actions regarding wildland fire,
- Increase public understanding of living in a fire-adapted ecosystem, and
- Increase the community's ability to prepare for, respond to and recover from wildland fires;
- Create and maintain fire adapted communities.

With these goals in mind, education and outreach are top priorities for the Upper Deschutes River CWPP. The rapid influx of new residents is just one reason the Steering Committee places high value on the education of local residents and landowners. Many new residents are unfamiliar with wildland fire and have limited experience with issues such as defensible space. Residents and visitors will continue to benefit from clear examples of what a fire resilient forest and community look like as well as easy access to resources that help them take action.

The creation of fire adapted communities is new to the Upper Deschutes River CWPP as a goal. As residents employ the recommendations in this CWPP, fire adapted communities will begin to surface. A recent public paradigm shift across the United States, a fire adapted community engages a higher degree of personal responsibility on the part of residents in fire prone areas. Residents and neighbors are encouraged to prepare not only their properties but also their families in fire safe practices including necessary evacuation protocols. Utilizing pre-fire strategies such as defensible space and fire resistant landscaping and construction materials, communities can turn entire neighborhoods into fire adapted communities where even in the event of a wildland fire, people can safely evacuate themselves, homes survive with little or no intervention from fire agencies and if trapped, people know what to do to survive the fire.

Deschutes County, Project Wildfire, and La Pine Fire endorse the nationwide Ready, Set, Go! Program that provides a framework for enhancing current education programs that will lead to the development of fire adapted communities.

Some neighborhoods in the Upper Deschutes River area are well organized through homeowners associations and other groups. These groups provide valuable ongoing education to their populations about the risks of high intensity wildland fire and ways to improve their protection. The Steering Committee supports these groups and encourages their formation in the Upper Deschutes River area to address the educational needs of current and incoming residents about living in a fire adapted community and increasing personal responsibility for creating defensible space.

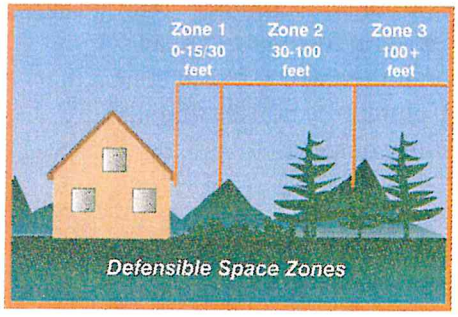


Figure 1

Local residents are encouraged to contact La Pine Fire or Project Wildfire for information. Residents may also find additional information on how they can reduce hazards and protect themselves from loss due to wildland fires at www.firefree.org and www.firewise.org.

Action Plan and Implementation

The Steering Committee recognizes that the UDR CWPP is a living tool with multiple applications. The following priority actions are intended to assist individuals and agencies in the implementation of this CWPP. It is important to note that the UDRC reviews and updates an Operations Plan annually. The Steering Committee acknowledges that yearly effort and maintains that the broad recommended actions in this CWPP support the specific projects in the annual Operations Plan.

Improving Fire Protection Capabilities

Immediately following the acceptance and signed approval of this plan, the Steering Committee will forward copies of the 2018 Upper Deschutes River CWPP available to all public land managers and public safety officials including:

- Central Oregon Forest Management Service - US Forest Service and BLM
- Oregon Department of Forestry
- La Pine Rural Fire Protection District
- Deschutes County Sheriff's Office
- Oregon Department of Transportation
- Burlington Northern Santa Fe Railroad Corporation

The Steering Committee is again charged with the task of engaging community members to review the Structural Vulnerability Assessment in this CWPP and identify projects that will strengthen the potential for the neighborhoods to survive a high intensity wildland fire in the Upper Deschutes River and the adjacent WUI. Homeowners can utilize tables 7 & 8 as a resource to improve the fire resistance of their homes on an individual basis.

The Steering Committee is also charged with the task of working with La Pine Fire to identify and assess the water resources available for fire suppression in the Communities at Risk. The Steering Committee will make recommendations for projects to ensure adequate water resources are available for fire suppression.

The Steering Committee will work with La Pine Fire, Deschutes County, Deschutes County Sheriff, and Oregon Department of Transportation to identify and map existing transportation and evacuation routes in each Community at Risk. The Steering Committee will assist in conducting further assessments to determine the evacuation needs of each Community at Risk and identify potential projects developing new routes and/or improving existing routes.

The Steering Committee will assist in conducting further assessments to determine the evacuation needs of the Upper Deschutes River Area and identify at least one neighborhood per year to approach and develop evacuation signage projects.

The Steering Committee will continue to encourage federal land managers to work with local landowners to minimize closures of roads that could be used as alternate evacuation routes from Communities at Risk.

Working towards a more Fire Adapted Community

The intention of the Steering Committee is to engage in continued discussions with landowners to facilitate fuels reduction projects on private lands utilizing the list of prioritized Communities at Risk. These actions can be accomplished through education activities or grants for specific projects on private lands. Specific action items for each Community at Risk are listed below:

Community at Risk	Specific Action Item
Little Deschutes	There is a significant amount of vegetation present; all stakeholders are urged to mitigate their fuels to create a fire resilient and healthy landscape. Ensuring the access & evacuation routes are clear of vegetation will ensure access for emergency personnel during large wildfires and/or other emergency incidents. Residents should develop evacuation kits for their family in case of a large wildfire.
Three Rivers	Given the historical and recent fire occurrence the crown fire potential is high. Residents are urged to create and maintain defensible space, reduce ladder fuels and thin where necessary. Ensuring the access & evacuation routes are clear of vegetation will ensure access for emergency personnel during large wildfires and/or other emergency incidents. Residents should develop evacuation kits for their family in case of a large wildfire.
Foster Road	Ensuring the access & evacuation routes are clear of vegetation will ensure access for emergency personnel during large wildfires and/or other emergency incidents. Given the historical and recent fire occurrence the crown fire potential is high. Residents are urged to create and maintain defensible space, reduce ladder fuels and thin where necessary.
Haner Park	Ensuring the access & evacuation routes are clear of vegetation will ensure access for emergency personnel during large wildfires and/or other emergency incidents. Residents should develop evacuation kits for their family in case of a large wildfire.

Big River	Given the historical and recent fire occurrence the crown fire potential is high. Residents are urged to create and maintain defensible space, reduce ladder fuels and thin where necessary. Residents should develop evacuation kits for their family in case of a large wildfire.
Fall River	Given the historical and recent fire occurrence the crown fire potential is high. Residents are urged to create and maintain defensible space, reduce ladder fuels and thin where necessary. Residents should develop evacuation kits for their family in case of a large wildfire. Ensuring the access & evacuation routes are clear of vegetation will ensure access for emergency personnel during large wildfires and/or other emergency incidents.
Wild River	Ensuring the access & evacuation routes are clear of vegetation will ensure access for emergency personnel during large wildfires and/or other emergency incidents. Given the historical and recent fire occurrence the crown fire potential is high. Residents are urged to create and maintain defensible space, reduce ladder fuels and thin where necessary.

The Steering Committee has expressed the vital need of educating vacant lot owners in the CWPP Boundary. The group will work on strengthening the relationships between residents and local leadership so that they can collaboratively develop an educational campaign that will target out-of-area owners. Education was an overarching theme that the Steering Committee agreed is a paramount priority throughout the revision process.

The Steering Committee will pursue funding for demonstration lots for local residents to use as examples in visible, strategic locations throughout the CWPP boundary. The Steering Committee will encourage and assist community groups in seeking funding for fuels reduction, educational, and other projects to decrease overall risks of loss from wildland fire.

One important piece of a Fire Adapted Community is preparing for the recovery process after a wildland fire occurs. There are many resources for residents who are recovering from a wildland fire that can impact their small business and home. Build community and business resiliency is the key to being fully adapted to fire. An After the Fire resources page can be found in the appendices of this document.

Restoring Resilient Landscapes

The intention of the Steering Committee is to engage in continued discussions with the local community and adjacent landowners to implement the CWPP and accomplish hazardous fuels reduction projects that address the prioritized Communities at Risk in the most expeditious manner possible.

The Steering Committee recognizes the effectiveness and value of maximizing treatment efforts in areas that are adjacent to federal, state or private projects and recommends that future projects consider these benefits when selecting areas for treatment.

There are 65,510 acres in the Planning Area. Significant fuels reduction projects continue to improve the overall health and fire resiliency of the landscape. Achieving a resilient healthy landscape however, requires multiple entries on treatment sites, over a period of years. For example, thinning and mowing may occur over a 12-24 month project period. The under-burning component of the project may not occur for 3-5 years while the land recovers from the thinning and mowing and produces an adequate shrub content to support prescribed fire.

Therefore, the Steering Committee recognizes that although significant fuels reduction work has been completed the need continues on the landscape as a whole. The Steering Committee supports the ongoing planning and treatment process on public lands, especially an increase in use of prescribed fire. There are multiple prescribed fire techniques that land mangers may use to best suit the area they are working within. The ultimate goal is to restore low intensity fire, or also known as a broadcast burn, to the local ecosystem, which has been historically dependent on fire for its health.

Treating ground fuels is a critical component of any effort designed to reduce fire threat, and it has added ecological benefits, such as recycling nutrients. Once an area, or unit, has been thinned and the slash has been treated, the site can be broadcast burned. Fire practitioners prepare the area by constructing firelines and/or use natural breaks such as roads or existing trails for containment lines for the prescribed burn. Where site objectives dictate that standing dead trees and large downed woody material need to be protected, they can be either hand lined or otherwise excluded from the burn block. Extra protection measures may not be necessary for many fire-tolerant cultural or archaeological sites: treating these areas with prescribed fire has the advantage of protecting them from emergency suppression activities during a wildfire. Generally, the target flame length is under four feet, although some sites require a "hotter" burn to achieve the resource objectives.

Historically, large-scale broadcast burning has occurred in the spring. As the demands to boost prescribed fire use increase, utilizing as many "burn windows", or days when the weather conditions are favorable, will be a critical piece in achieving restoration goals. This, however, is a more challenging time to use prescribed fire and will depend on the availability and preparedness of appropriate resources and weather.

Burn operations usually begun by mid-morning following the break-up of the nighttime temperature inversion and the establishment of the daytime wind pattern. Completion of ignition should be targeted early enough to ensure adequate smoke dispersal prior to the onset of cooler nighttime temperatures.

Extensive public notification is an essential element of the program. The public can contact the Deschutes National Forest if they have health concerns that are exacerbated by smoke so that they can be notified prior to a prescribed burn. The Deschutes National Forest uses social media; especially Twitter, their handle is @CentralORFire and Central Oregon Fire, www.centraloregonfire.org, to notify local residents of prescribed burns on the Forest. Fire personnel also rely on their local partners to notify and educate the local public through educational programs with civic groups, service clubs, homeowner associations, etc.

Once thinning, slash treatment, and first under-burning have been completed, the treated area constitutes an effective fuel-break for the next several years. Follow-up thinning and maintenance burns must be scheduled as necessary to ensure the treated areas remain free of the risk of catastrophic wildfire. Adequate access must be assured, not only to conduct needed follow-up treatments, but also to permit rapid response of fire suppression forces.

For our area, it is no longer a question of if a wildfire will occur, but when, where, and how much damage will result. Working with residents before the wildfire, not during or after it, is preferred. Experience with wildfires burning in previously treated areas demonstrates the following:

- Improved access for fire fighters and apparatus
- Increased efficiency when locating and constructing firelines
- Easier detection and suppression of spot fires
- Decreased mop up time and effort
- Reduced fire intensity, torching and mortality
- Improved public safety
- Reduction of loss
- Reduction of air emissions

Another benefit, particularly in interface areas, is reduced trash accumulation through elimination of hiding cover necessary for transient camps and party spots.

Evaluation and Monitoring

Monitoring of progress and accountability for accomplishment of the actions in this plan is critical to the success of the CWPP. Monitoring provides an essential feedback loop that is the basis for continuous adaptation and improvement. Monitoring also includes the opportunity to identify and incorporate new accomplishment data and scientific information as it becomes available.

The Steering Committee faced a complex task in the development of the Upper Deschutes River Community Wildfire Protection Plan. Implementing and sustaining these efforts will require a significant commitment. Maintaining a collaborative and cooperative environment with residents, community-based organizations, local government and the public land management agencies will be critical to reducing the risk of loss from wildland fire. The Steering Committee pledges to maintain this cooperation with the public and stakeholders over the long-term with the commitment of all the partners involved.

At a minimum, the Steering Committee shall include: the Program Director from Project Wildfire; the co-chairs of the UDRC private lands, public lands and watershed committees; a representative from Oregon Department of Forestry (ODF); a representative from Central Oregon Fire Management Service (COFMS), and Deschutes County along with other stakeholders and members of the public.

The Steering Committee agrees that the UDR Community Wildfire Protection Plan will be a living document, intended to promote fuels reduction, educational, and other projects to decrease overall risks of loss from wildland fire; updated and revisited regularly to address its Purpose.

Project Wildfire or the UDRC will convene the Steering Committee on an annual basis in October to review the UDR Community Wildfire Protection Plan with a minimum target for reviewing and updating the plan every five years. Topics for discussion can include:

- Identification and assessment of new or treated risks.
- Evaluation and tracking of progress toward goals.
- Updating of maps using current data.
- Adoption of new and/or revised priorities.
- Identification of specific projects.
- Discussion of grant opportunities and determination of projects eligible for funding.
- Writing of grants.

- Identification of appropriate projects to address additional items as outlined in the Action Plan for Structural Vulnerability, Education and Critical Transportation Routes.
- Coordination of additional items, projects and assessments.

Project Wildfire will ensure that the evaluation and monitoring activities listed above are addressed by a Steering Committee each year. As members of the Steering Committee change, Project Wildfire will ensure that it maintains a balanced representation of agency and public members, with a continued focus on inviting interested parties and stakeholders to participate in the review and planning process.

Declaration of Agreement

Under the Healthy Forests Restoration Act, the applicable local government, the local fire department(s) and the state entity responsible for forest management approve the CWPP. The Upper Deschutes River Community Wildfire Protection Plan (CWPP) was originally completed and signed in December 2005 and a revision was completed in 2013. As directed by this CWPP, extensive fuels reduction and fire prevention activities have been completed on public and private lands. Recent wildland fires have also impacted the landscape and neighborhoods. Combined, these events have changed the priorities outlined in the previous documents.

This plan is not legally binding as it does not create or place mandates or requirements on individual jurisdictions. It is intended to serve as a planning tool for fire and land managers and residents to assess risks associated with wildland fire and identify strategies and make recommendations for reducing those risks.

Mike Supkis, Fire Chief
La Pine Rural Fire Protection District — 12-13-2018 Date

Monte Dammarell, Chair
Upper Deschutes River Coalition — 12/18/18 Date

Gordon R. Foster, Unit Forester
Oregon Department of Forestry — 12/18/18 Date

Anthony De Bone, Chair
Deschutes County Board of Commissioners — 20 Dec 18 Date

Three Rivers

14,765 acres 2,046 structures 5,115 population

1. What is the likelihood of a fire occurring?

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	20 (3.3)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	5 (1.39)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**35**
Risk category rating: 0 – 13 points = Low 13 – 27 points = Moderate 27 – 40 points = High	
Rating:	**High**

Other factors: power lines or stations, logging, construction, debris burning, mining, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, military training, arson, cultural activities, railroad, highways, county or public access road, camps/resorts/stables, schools, business, ranch or farm, lightning prone, dumping

2. Hazards

Three Rivers

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	10
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	3
Total points:	**57**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**High**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Three Rivers

2018

Fire response Organized structural response < 10 minutes 0 points Inside fire district, response > 10 minutes 8 points No structural protection, only wildland response 15 points No structural or wildland protection 36 points	2
Community Preparedness Organized stakeholder group, community fire plan, phone tree, or mitigation efforts 0 points Primarily agency efforts (mailings, FireFree, etc.) 2 points No efforts 4 points	0
Total points:	**2**
Protection Capability Category Rating: 0 – 9 points = Low 10 – 16 points = Moderate 17 – 40 points = High	
Rating:	**Low**

4. Values Protected: Human and economic

Homes (density per 10 acres) 0.1 – 0.9 (rural) 2 points 1 – 5 (suburban) 15 points 5.1 + (urban) 30 points	15 (1.39)
Community Infrastructure None 0 points One present 10 points More than one present 20 points	20
Total points:	**35**
Values Protected Category Rating: 0 – 15 points = Low 16 – 30 points = Moderate 31 – 50 points = High	
Rating:	**High**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 update:

- There have not been vegetation projects in this area on federal lands to reduce the vegetation threat.
- There has been some community work in multiple neighborhoods in the rating area.
- The response time can be slightly longer due to some road conditions.

Big river

8.082 acres 412 structures 1,030 population

1. **What is the likelihood of a fire occurring?**

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	20 (1.2)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	0 (0.51)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**30**
Risk category rating: 0 – 13 points = Low 13 – 27 points = Moderate 27 – 40 points = High	
Rating:	**High**

Other factors: power lines or stations, logging, construction, debris burning, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, arson, cultural activities, highways, county or public access road, ranch or farm, lightning prone, dumping

2. Hazards

Big River

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	15
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	5
Total points:	**64**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**Extreme**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Big River

2018

Fire response Organized structural response < 10 minutes 0 points Inside fire district, response > 10 minutes 8 points No structural protection, only wildland response 15 points No structural or wildland protection 36 points	1
Community Preparedness Organized stakeholder group, community fire plan, phone tree, or mitigation efforts 0 points Primarily agency efforts (mailings, FireFree, etc.) 2 points No efforts 4 points	0
Total points:	**1**
Protection Capability Category Rating: 0 – 9 points = Low 10 – 16 points = Moderate 17 – 40 points = High	
Rating:	**Low**

4. Values Protected: Human and economic

Homes (density per 10 acres) 0.1 – 0.9 (rural) 2 points 1 – 5 (suburban) 15 points 5.1 + (urban) 30 points	2 (0.51)
Community Infrastructure None 0 points One present 10 points More than one present 20 points	20
Total points:	**22**
Values Protected Category Rating: 0 – 15 points = Low 16 – 30 points = Moderate 31 – 50 points = High	
Rating:	**Moderate**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 Update:

- Even though there has been some fuel reduction in this area, more is needed on both private and federal lands.
- The response times are shorter but there still are some access concerns that can affect response time.

Foster

4,346 acres 280 structures 700 population

1. What is the likelihood of a fire occurring?

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	20 (1.2)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	0 (0.64)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**30**
Risk category rating: 0 – 13 points = Low 13 – 27 points = Moderate 27 – 40 points = High	
Rating:	**High**

Other factors: power lines or stations, logging, construction, debris burning, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, arson, cultural activities, county or public access road, ranch or farm, lightning prone, dumping

2. Hazards

Foster

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	13
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	3
Total points:	**60**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**High**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Foster

2018

Fire response Organized structural response < 10 minutes 0 points Inside fire district, response > 10 minutes 8 points No structural protection, only wildland response 15 points No structural or wildland protection 36 points	3
Community Preparedness Organized stakeholder group, community fire plan, phone tree, or mitigation efforts 0 points Primarily agency efforts (mailings, FireFree, etc.) 2 points No efforts 4 points	4
Total points:	**7**
Protection Capability Category Rating: 0 – 9 points = Low 10 – 16 points = Moderate 17 – 40 points = High	
Rating:	**Low**

3. Values Protected: Human and economic

Homes (density per 10 acres) 0.1 – 0.9 (rural) 2 points 1 – 5 (suburban) 15 points 5.1 + (urban) 30 points	2 (0.64)
Community Infrastructure None 0 points One present 10 points More than one present 20 points	10
Total points:	**12**
Values Protected Category Rating: 0 – 15 points = Low 16 – 30 points = Moderate 31 – 50 points = High	
Rating:	**Low**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 Update:

- For the vegetation component the steering committee agreed that even though there has been some fuel reduction completed on the lands surrounding the homes in this area, there is still work that needs be accomplished by residents to reduce the crown fire and fire behavior risk factors.
- There has not been much if any community preparedness accomplished in this rating area.

Wild River

10,301 acres 110 structures 275 population

1. What is the likelihood of a fire occurring?

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	20 (2.1)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	0 (0.11)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**30**
Risk category rating: 0 – 13 points = Low 14 – 27 points = Moderate 28 – 40 points = High	
Rating:	**High**

Other factors: power lines or stations, logging, construction, debris burning, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, arson, cultural activities, county or public access road, ranch or farm, lightning prone, dumping

2. Hazards

Wild River

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	5
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	1
Total points:	**50**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**High**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Wild River

2018

Fire response		
Organized structural response < 10 minutes	0 points	0
Inside fire district, response > 10 minutes	8 points	
No structural protection, only wildland response	15 points	
No structural or wildland protection	36 points	
Community Preparedness		
Organized stakeholder group, community fire plan, phone tree, or mitigation efforts	0 points	0
Primarily agency efforts (mailings, FireFree, etc.)	2 points	
No efforts	4 points	
	Total points:	**0**
Protection Capability Category Rating:		
0 – 9 points = Low		
10 – 16 points = Moderate		
17 – 40 points = High		
	Rating:	**Low**

4. Values Protected: Human and economic

Homes (density per 10 acres)		
0.1 – 0.9 (rural)	2 points	2 (0.11)
1 – 5 (suburban)	15 points	
5.1 + (urban)	30 points	
Community Infrastructure		
None	0 points	10
One present	10 points	
More than one present	20 points	
	Total points:	**12**
Values Protected Category Rating:		
0 – 15 points = Low		
16 – 30 points = Moderate		
31 – 50 points = High		
	Rating:	**Low**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 Update:

- This rating area includes the Pringle Falls Experimental Forest where fuel mitigation has occurred and residents have taken steps to prepare their properties.

Little Deschutes

10,984 acres 506 structures 1,265 population

1. What is the likelihood of a fire occurring?

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	20 (2.2)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	0 (0.46)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**30**
Risk category rating: 0 – 13 points = Low 13 – 27 points = Moderate 27 – 40 points = High	
Rating:	**High**

Other factors: power lines or stations, logging, construction, debris burning, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, arson, cultural activities, highways, county or public access road, camps/resorts/stables, business, ranch or farm, lightning prone, dumping

2. Hazards

Little Deschutes

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	15
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	5
Total points:	**64**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**Extreme**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Little Deschutes

2018

Fire response		
Organized structural response < 10 minutes	0 points	3
Inside fire district, response > 10 minutes	8 points	
No structural protection, only wildland response	15 points	
No structural or wildland protection	36 points	
Community Preparedness		
Organized stakeholder group, community fire plan, phone tree, or mitigation efforts	0 points	2
Primarily agency efforts (mailings, FireFree, etc.)	2 points	
No efforts	4 points	
	Total points:	**5**
Protection Capability Category Rating:		
0 – 9 points = Low		
10 – 16 points = Moderate		
17 – 40 points = High		
	Rating:	**Low**

3. Values Protected: Human and economic

Homes (density per 10 acres)		
0.1 – 0.9 (rural)	2 points	2 (0.46)
1 – 5 (suburban)	15 points	
5.1 + (urban)	30 points	
Community Infrastructure		
None	0 points	20
One present	10 points	
More than one present	20 points	
	Total points:	**22**
Values Protected Category Rating:		
0 – 15 points = Low		
16 – 30 points = Moderate		
31 – 50 points = High		
	Rating:	**Moderate**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 Update:

- The Steering Committee recognizes that this area does not have many organized efforts around community preparedness. Many residents may be working individually however; there is a need to work on a community scale.
- There has not been the level of fuel reduction accomplished in this rating area compared to the others on the western boundary.

Fall River

10,301 acres 96 structures 240 population

1. What is the likelihood of a fire occurring?

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	10 (0.7)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	0 (0.09)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**20**
Risk category rating: 0 – 13 points = Low 13 – 27 points = Moderate 27 – 40 points = High	
Rating:	**Moderate**

Other factors: power lines or stations, logging, construction, debris burning, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, arson, cultural activities, highways, county or public access road, ranch or farm, lightning prone, dumping

2. Hazards

Fall River

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	10
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	3
Total points:	**57**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**High**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Fall River

2018

Fire response Organized structural response < 10 minutes 0 points Inside fire district, response > 10 minutes 8 points No structural protection, only wildland response 15 points No structural or wildland protection 36 points	0
Community Preparedness Organized stakeholder group, community fire plan, phone tree, or mitigation efforts 0 points Primarily agency efforts (mailings, FireFree, etc.) 2 points No efforts 4 points	0
Total points:	**0**
Protection Capability Category Rating: 0 – 9 points = Low 10 – 16 points = Moderate 17 – 40 points = High	
Rating:	**Low**

4. Values Protected: Human and economic

Homes (density per 10 acres) 0.1 – 0.9 (rural) 2 points 1 – 5 (suburban) 15 points 5.1 + (urban) 30 points	2 (0.09)
Community Infrastructure None 0 points One present 10 points More than one present 20 points	20
Total points:	**22**
Values Protected Category Rating: 0 – 15 points = Low 16 – 30 points = Moderate 31 – 50 points = High	
Rating:	**Moderate**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 Update:

- There has been federal work on areas surrounding Fall River Estates and some is in the planning phases.
- High levels of coordination between community members in this rating area.

Haner Park

7,661 acres 38 structures 95 population

1. What is the likelihood of a fire occurring?

	2018
Fire occurrence (per 1000 acres per 10 years) 0 – 0 .1 (low) 5 points 0.1 – 1.1 (moderate) 10 points 1.1+ (high) 20 points	20 (3.5)
Ignition Risk – Home Density (homes per 10 acres) 0 - 0 .9 (rural) 0 points 1 – 5 (suburban) 5 points 5.1+ (urban) 10 points	0 (0.05)
Ignition Risk – Other Factors Present < 1/3 present 0 points 1/3 – 2/3 present 5 points > 2/3 present 10 points	10
Total points:	**30**
Risk category rating: 0 – 13 points = Low 13 – 27 points = Moderate 27 – 40 points = High	
Rating:	**High**

Other factors: power lines or stations, logging, construction, debris burning, dispersed or developed camping, off-road vehicle use, flammables, fireworks, dry grass mowing, woodcutting, equipment use, target shooting, arson, cultural activities, highways, county or public access road, ranch or farm, lightning prone, dumping

2. Hazards

Haner Park

2018

Weather Zone 3	40
Topography - Slope 0 – 25% 0 points 26 – 40% 3 points 41% + 5 points	0
Topography - Aspect N, NW, NE 0 points W, E 3 points S, SW, SE 5 points	3
Topography - Elevation 5001 feet + 0 points 3501 – 5000 feet 1 point 0 – 3500 feet 2 points	1
Vegetation (SB 360 definition) Non-forest 0 points HV 1 5 points HV 2 15 points HV 3 20 points	15
Crown Fire Potential Passive - Low 0 points Active – Moderate 5 points Independent – High 10 points	3
Total points:	**62**
Risk category rating: 0 – 9 points = Low 10 – 40 points = Moderate 41 – 60 points = High 61 – 80 points = Extreme	
Rating:	**Extreme**

HV 1 – produces flame lengths up to 5 feet with very little spotting, torching or crowning.
HV 2 – produces flame lengths 5-8 feet high with sporadic spotting, torching or crowning.
HV 3 – produces flame lengths over 8 feet with frequent spotting, torching and crowning.

3. Protection Capabilities

Haner Park

2018

Fire response Organized structural response < 10 minutes 0 points Inside fire district, response > 10 minutes 8 points No structural protection, only wildland response 15 points No structural or wildland protection 36 points	10
Community Preparedness Organized stakeholder group, community fire plan, phone tree, or mitigation efforts 0 points Primarily agency efforts (mailings, FireFree, etc.) 2 points No efforts 4 points	2
Total points:	**12**
Protection Capability Category Rating: 0 – 9 points = Low 10 – 16 points = Moderate 17 – 40 points = High	
Rating:	**Low**

4. Values Protected: Human and economic

Homes (density per 10 acres) 0.1 – 0.9 (rural) 2 points 1 – 5 (suburban) 15 points 5.1 + (urban) 30 points	2 (0.05)
Community Infrastructure None 0 points One present 10 points More than one present 20 points	10
Total points:	**12**
Values Protected Category Rating: 0 – 15 points = Low 16 – 30 points = Moderate 31 – 50 points = High	
Rating:	**Low**

Community infrastructure – Power substations and corridors, transportation corridors, municipal watersheds, water storage and distribution, fuel storage, health care facilities, landfills and waste treatment, schools, churches, community centers, and stores.

2018 Update:

- There has been federal work on areas surrounding Haner Park subdivision but more is needed along access roads and within the WUI Boundary to reduce fire behavior.
- Access and length of response is a larger consideration for this rating area.

Three Rivers

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**3**
Defensible space Meets local requirements Non-compliant with local standards	**7**
Ingress/egress Two or more roads in/out One road in/out	**0**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**2**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**1**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**0**
Street signs Present with 4" reflective characters Absent	**0**
Total	**13**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Low**

Big River

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**1**
Defensible space Meets local requirements Non-compliant with local standards	**3**
Ingress/egress Two or more roads in/out One road in/out	**0**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**2**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**1**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**0**
Street signs Present with 4" reflective characters Absent	**0**
Total	**7**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Low**

Foster

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**3**
Defensible space Meets local requirements Non-compliant with local standards	**15**
Ingress/egress Two or more roads in/out One road in/out	**7**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**2**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**4**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**1**
Street signs Present with 4" reflective characters Absent	**1**
Total	**33**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Moderate**

Wild River

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**2**
Defensible space Meets local requirements Non-compliant with local standards	**1**
Ingress/egress Two or more roads in/out One road in/out	**4**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**2**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**1**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**0**
Street signs Present with 4" reflective characters Absent	**0**
Total	**10**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Low**

*Note: Ingress & egress score is due to the good road conditions even though this rating area only has one road in and out.

Little Deschutes

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**3**
Defensible space Meets local requirements Non-compliant with local standards	**12**
Ingress/egress Two or more roads in/out One road in/out	**5**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**3**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**1**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**3**
Street signs Present with 4" reflective characters Absent	**0**
Total	**27**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Low**

Fall River

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**2**
Defensible space Meets local requirements Non-compliant with local standards	**3**
Ingress/egress Two or more roads in/out One road in/out	**4**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**2**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**1**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**0**
Street signs Present with 4" reflective characters Absent	**0**
Total	**12**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Low**

*Note: Ingress & egress score is due to the good road conditions even though this rating area only has one road in and out.

Haner Park

Structural Vulnerability Assessment

Flammable roofing Non-wood roofing Wood roofing	**0**
Defensible space Meets local requirements Non-compliant with local standards	**1**
Ingress/egress Two or more roads in/out One road in/out	**7**
Road width Greater than 24 feet 24 – 20 feet Less than 20 feet	**4**
All-season road condition Surfaced with grade less than 5% Surfaced with grade more than 5% Non-surfaced with grade less than 5% Non-surfaced with grade more than 5% Other than all-season	**4**
Fire service access Less than 300 feet with turnaround More than 300 feet with turnaround Less than 300 feet without turnaround More than 300 feet without turnaround	**4**
Street signs Present with 4" reflective characters Absent	**5**
Total	**25**
Category rating for each column: **0 – 30 = Low** **31 – 60 = Moderate** **61 – 90 = High**	**Low**

Glossary of Terms

- **Assessment of Risk Factors:** Risk Assessment process developed by the Oregon Department of Forestry that allows for an objective identification and wildfire risk assessment of Oregon's Communities that is appropriate at all levels of resolution, i.e. statewide, community to individual tax lot. Includes five factors that sum to an overall score to assess and compare risk: risk, hazard, protection capabilities, values protected and structural vulnerability.

- **Cohesive Strategy:** In 2009, Congress passed the Federal Land Assistance, Management, and Enhancement (FLAME) Act and called for a National Cohesive Wildland Fire Management Strategy, also known commonly as the Cohesive Strategy, to address wildland fire related issues across the nation in a collaborative, cohesive manner. The Cohesive Strategy was finalized in 2014 and represents the evolution of national fire policy: To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire. The primary, national goals identified as necessary to achieving the vision are: **Resilient landscapes**: Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives. **Fire-adapted communities**: Human populations and infrastructure can withstand a wildfire without loss of life and property. **Wildfire response**: All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

- **Crown Fires:** A fire that advances from top to top of trees or shrubs more or less independent of a surface fire. Crown fires are sometimes classed as running or dependent to distinguish the degree of independence from the surface fire.

- **Defensible Space:** Defensible Space, in the context of fire control, is the natural and landscaped area around a structure that has been maintained and designed to reduce wildfire danger by using vegetation that is fire resistant.

- **Deschutes Collaborative Forest Project:** In 2010, a collaborative group of local agencies and organizations formed a proposal for funding a large, collaborative forest restoration and hazardous fuels reduction project on public lands managed by the Deschutes National Forest. This landscape level project is known as the Deschutes Collaborative Forest Project (DCFP).

- **Dispersed Campgrounds & Recreational Sites:** Campsites or recreational sites members of the public use that are outside of a designated campground or developed recreation site. These sites do not have trash removal or facilities such as tables and fire pits. For more information on how to use dispersed recreational sites visit: http://www.fs.usda.gov/

- **Fire Adapted Community:** One of the tenents of the Cohesive Strategy. A Fire Adapted is one that acknowledges and takes responsibility for its wildfire risk, and implements appropriate actions at all levels. Deschutes County is a pilot community for the Fire Adapted Communities Learning Network. For more information visit: http://www.facnetwork.org

- **Fire Break:** A gap in vegetation or other combustible materials that acts as a barrier to slow or stop the progress of a wildfire.

- **Fire Prone Area:** A geographic area that can support a wildfire due to weather and vegetation.

- **Fire Resiliency:** A landscape or geographic location that is able to withstand wildfire without suffering catastrophic effects, such as loss of life, home loss or damage and/or environmental damage.

- **Fire Return Interval:** The time between fires in a defined area or landscape.

- **Fire Suppression Costs:** The financial figure that is incurred during any operations by fire fighting agencies to suppress (or put out), a wildland fire.

- **FireFree:** A local program in Central Oregon that uses ten steps to educate property owners on how to defend their home from wildfire. FireFree also provides two annual events where homeowners can dispose of debris created from wildfire preparedness activities.

- **Firewise:** A national program that provides a process that empowers neighbors to work together in reducing their wildfire risk. The National Fire Protection Association sponsors the Firewise program.

- **Hazardous Fuel Reduction:** Reducing vegetation that could accelerate a wildland fire.

- **Hazardous Fuels:** Any fuel or vegetation that will sustain or accelerate a wildland fire.

- **High Intensity:** Fire intensity represents that energy releases during various phases of the fire. High intensity fires are damaging to certain vegetation and ecosystems that are not adapted to them. Much of the lower elevation forests in Central Oregon are adapted to lower intensities.

- **Overstory:** Also called the canopy. Made up of the tallest trees that stand over the rest of the plants in the landscape.

- **Pacific Northwest Coordination Center:** The Northwest Interagency Coordination Center (NWCC) is the Geographic Area Coordination Center for the Northwest Region, which includes the States of Oregon and Washington. Located in Portland, OR, the NWCC serves as the focal point for interagency resource coordination, logistics support, aviation support and predictive services for all state and federal agencies involved in wildland fire management and suppression in the region. Cooperating agencies include the: Bureau of Land Management, US Forest Service, Oregon Dept of Forestry, US Fish and Wildlife Service, Bureau of Indian Affairs, Washington Dept. of Natural Resources and the National Park Service.

- **Resilient Landscapes:** A landscape that is able to recover quickly or repel disturbances that may be a departure from normal circumstances.

- **Silvicultural Treatments:** A planned series of treatment that aide in achieving the goals set forth by a diverse set of values. Silviculture is the practice of controlling the establishment, growth, composition, health and quality of forests to meet diverse needs and values.

- **Stand Dynamics:** The underlying physical and biological forces that shape and change a particular area or forest stand.

- **Structural Ignitability:** Also known as Structural Vulnerability; which refers to the probability of a home igniting during a large wildfire.

- **Structural Vulnerability Factors:** Factors that can increase or decrease a home's probability of igniting during a large wildfire. Examples include: roof composition, roof cleanliness, vent covers, deck composition & cleanliness, etc.

- **Thick Bark Pine:** a local species is Ponderosa Pines. Their thick bark makes them a fire resistant species. The lower elevation forests that were/are dominated by Ponderosa Pines are adapted to low intensity fire that would burn through as often as every ten years.

- **Tree Crowns:** See overstory. Also known as the tree canopy.

- **Understory:** The layer of vegetation beneath the main canopy of a forest.

- **Wildfire Preparedness:** Changing behaviors and/or process to reduce the impact a wildfire may have on the population.

- **Wildland Fire:** Any non-structural fire that occurs in vegetation or natural fuels. An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all

other wildland fires where the objective is to put the fire out.

- **Wildland Fuels:** Vegetation that is located in an area in which development is essentially non-existent, except for roads, railroads, powerlines, and similar transportation facilities. Structures, if any, are widely scattered.

- **Wildland Urban Interface (WUI):** The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Describes an area within or adjacent to private and public property where mitigation actions can prevent damage or loss from wildfire. Much of Deschutes County is considered Wildland Urban Interface.

Definitions of commonly used program terms:

Project Wildfire:

The local county organization responsible for education of local stakeholders, revisions of Community Wildfire Protection Plans, grant writing, and overall facilitation of wildfire mitigation in Central Oregon.

FireFree:

Project Wildfire flagship event and educational program. The event occurs twice a year, spring and fall. The spring event is a free event and fall is a half-price sale for the disposal of yard debris. Allows for residents to have a cost effective and easy way to dispose of their yard debris without feeling obligated to burn or dump illegally. This is the year round educational effort for residents to learn the 10 easy steps they can take to protect their own.

Firewise:

Firewise is a national recognition program that is a faction of National Fire Protection Association (NFPA). This program recognizes particular communities who have distinguished themselves as neighborhoods who are concerned with preparedness in regards to wildfire. Oregon Department of Forestry acts as the contact point between the Firewise program and local communities in the state of Oregon.

Fire Adapted Communities:

This is a national term that refers to much of what Deschutes County has been working toward for the better part of a decade. A fire adapted community acknowledges and takes responsibility for its wildfire risk, and implements appropriate actions at all levels. Actions address resident safety, homes, neighborhoods, businesses and infrastructure, forests, parks, open spaces and other community assets. Every community has a unique set of circumstances and capacities, so the kinds of actions they take will vary. Further, there is no end-point in becoming a fire adapted community. Sustaining, growing and adapting strategies, partnerships and capacity through time are key.

Appendix E: Post Fire Recovery

During the Fire Contacts

Deschutes County 911 Non-Emergent Line	(541) 693-6911
American Red Cross (Eastern & Central Oregon Chapter)	(541) 382-2142

Web links for Fire and Evacuation Information:

• Central Oregon Fire Information	Central Oregon Fire Info
• Deschutes County Emergency Blog	Deschutes County Emergency Info
• Central Oregon Interagency Twitter Feed	twitter.com/CentralORFire
• Deschutes County Sheriff's Twitter Feed	twitter.com/DeschutesSO
• Evacuation Guide	Ready, Set, Go
• Emergency Notifications	Deschutes County Alerts

After the Fire Resources for Affected Residents

Fire Management Assistance (FMAG) is available to States, local and tribal governments, for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands, which threaten such destruction as would constitute a major disaster. The Fire Management Assistance declaration process is initiated when a State submits a request for assistance to the Federal Emergency Management Agency (FEMA) Regional Director at the time a "threat of major disaster" exists. The entire process is accomplished on an expedited basis and a FEMA decision is rendered in a matter of hours.

The Fire Management Assistance Grant Program (FMAGP) provides a 75 percent Federal cost share and the State pays the remaining 25 percent for actual costs. Before a grant can be awarded, a State must demonstrate that total eligible costs for the declared fire meet or exceed either the individual fire cost threshold - which is applies to single fires, or the cumulative fire cost threshold, which recognizes numerous smaller fires burning throughout a State. Eligible firefighting costs may include expenses for field camps; equipment use, repair and replacement; tools, materials and supplies; and mobilization and demobilization activities.

FEMA Individual Assistance (FEMA IA) has created a set of tools to help those facilitating their community's recovery. Community Services Programs deliver a variety of services to assist in disaster recovery. Disaster Housing Resources provides links to access information on multiple disaster housing programs and strategies. FEMA Voluntary Agency and Donations Coordination delivers information, support and guidance during disaster recovery. The National Emergency Child Locator Center and National Mass Evacuation Tracking System are both tracking databases that can be activated during disasters and assist in reunifying family members. The National Shelter System is a database that supports the agencies responsible for Mass Care and Emergency Assistance. For information on these tools follow this link to FEMA's site.

FEMA Public Assistance (FEMA PA) mission's to provide assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

Through the PA Program, FEMA provides supplemental Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain Private Non-Profit (PNP) organizations. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

The Federal share of assistance is not less than 75% of the eligible cost for emergency measures and permanent restoration. The grantee (usually the State) determines how the non-Federal share (up to 25%) is split with the sub-grantees (eligible applicants).

Small Business Disaster Loans through the Small Business Administration (SBA). SBA provides low-interest disaster loans to businesses of all sizes, private non-profit organizations, homeowners, and renters. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.

Oregon VOAD (Voluntary Organizations Active in Disaster) is a group of faith-based, community service organizations with disaster relief roles related to short and long-term recovery from disasters.

Functions include but are not limited to: damage assessment, cleanup, building repair, donations management, child care, clothing, communication, counseling, disaster welfare inquiry, financial assistance, food, human relations, mass care, sheltering, transportation, volunteer staffing, warehousing and bulk distribution. ORVOAD coordinates disaster planning with member agencies to ensure reduction of duplication and an increase in effective delivery of services.

Natural Resources Conservation Services (NRCS) may provide funding they are allocated to help with fire recovery efforts for agricultural and private, non-industrial forestland owners. Program and application announcements will be made as funding becomes available. Please check this site frequently for updates.

American Red Cross Casework**:** Providing Emergency Assistance is trains Red Cross caseworkers how to conduct effective client interviews and provide appropriate assistance to help meet a client's immediate disaster-caused or disaster-aggravated needs.

Fire Recovery Safety Tips

REMEMBER – use caution and good judgment. Hazards may still exist, even though the fire is controlled.

ELECTRICAL

Electrical Safety Facts

General: An important part of the disaster recovery is hazard recognition. Should you come across damaged or fallen power poles or lines, contact your local electrical power authorities. DO NOT TOUCH THE DOWNED WIRES. In the cleanup area, be especially careful when cutting trees and operating heavy equipment around power lines. Vegetation and power poles may have lost stability due to fire damage.

If a power line or pole should fall next to you while working in the area, *do not walk – hop out of the area.* (Using this technique, you will be less likely to be a conductor of electricity).

Electricity is always trying to go somewhere. It goes easily through conductors; it does not go easily through non-conductors.

Conductors	Non-Conductors
Metal	Rubber
Water	Glass
Wet Things	Plastic
Things In Water (including animals/pets)	

One of the most important fixtures in the conduction of electric current are utility poles. The fire or fire suppression actions may have dislodged or broken some of these poles, causing the wires to sag or break, resulting in extremely hazardous conditions. Do not touch anything at the scene.

Trees can also be dangerous conductors of electricity. When a tree falls or grows into contact with power wires, the electric power diverts and finds a path to the ground through the branches and the trunk. Anyone who comes into contact with these trees is subject to tragic consequences, since electric power can easily jump from the tree to the person.

Electrical Safety Tips

- Do not overload circuits; don't operate several large appliances at the same time on the same circuit.
- Do not use extension cords to plug in many items on one outlet.
- Turn off appliances when you finish using them. Provide adequate air circulation around all appliances to prevent over-heating. Keep appliances clean, repaired and serviced.

- Check wires and plugs regularly. Replace worn or frayed wires. Do not run cords under carpets or across doorways.
- Be careful when replacing fuses or breakers. Keep the area near the circuit box dry and turn the main switch off before changing the fuse/breaker.
- Temporary lines should be removed from service.

Electrical Locations To Avoid

- Electrical meters and service lines coming into the home or other outbuildings.
- Any power supply line which appears to sag, show bare wire, or have insulation missing.
- Secured power sub-stations or any area identified as high voltage.
- Downed power lines.

Emergency Procedures for an Electrical Fire

- Call the fire department.
- Shut off power supply at the breaker if possible.

Restoring Electric Power

If, upon returning to your residence, there is no electrical power, please check to make sure the main breaker is on. If the breakers are on and power is still not present, please call to report the power outage to your local electrical power authorities.

Reporting problems like a down or broken wire will speed up the process of power restoration.

- Stand off to one side of the breaker box when turning on the main breaker. Do not stand directly in front of the box.
- If any smells of hot electrical insulation or sparking occurs, turn of the breaker immediately and call an electrician.
- If electrical lights or appliances appear brighter than normal, turn off main breaker. The service entrance needs to be checked.

To Change A Fuse

Try to find the cause of the blown fuse, and correct it by disconnecting the defective appliance or appliances causing the overload or short circuit. Shut off the main power switch when you change the fuse.

- Do not replace fuses with a higher amp rating fuse than you removed.
- Turn on the main switch to restore the power.
- If the fuse blows again, leave it alone and contact a certified electrician. Other problems may exist and should be investigated to remove the possibility of an electrical fire.

To Reset A Circuit Breaker

Try to find the cause of the overload or short circuit and correct it by disconnecting the defective appliance or appliances. Turn the switch to "on" to reset and restore power. If breaker trips again leave it alone, and contact a certified electrician. Other problems may exist and should be found to remove the possibility of an electrical fire.

Special Information of Fuses & Circuit Breakers

Fuses and circuit breakers shut off the current whenever too much current tries to flow through a wire because of:

- A short circuit, possibly caused by a bare wire touching the ground;
- Overloading, possibly caused by too many lights or appliances on one circuit; or
- By defective parts in an appliance.

Know where the main circuit or fuse box is located in your house. Be sure you can locate the main switch; it controls all of the power coming into the house and is usually inside the circuit box. In some cases, however, it may be located outside of the house. Fuse or circuit boxes generally are labeled to designate which area of the house the circuits or fuses serve.

DRINKING WATER

Restoring Water Systems

Unless impacted by a fuel spill, the fire should not have affected wells at undamaged homes. If your house was damaged, your water system may potentially have become contaminated with bacteria due to loss of water pressure. In this case it is recommended that the well be disinfected and the water be tested before consumption. To disinfect your water system, pour ½ - 1 cup of chlorine bleach inside the well casing and turn on all faucets until a chlorine scent in noticed. Allow the chlorine solution to remain in the system overnight. The following morning, open all faucets and flush the system until free of chlorine smell.

If you have a public use well or water system, contact the County Health Department for specifics on testing prior to consumption of any water.

SOLID WASTE

Removing Debris

Cleanup of your property can expose you to potential health problems from hazardous materials. Wet down any debris to minimize health impacts from breathing dust particles. The use of a two-strap dust particulate mask with nose clip and coveralls will provide the best minimal protection. Leather gloves should be worn to protect your hands from sharp objects while removing debris.

Hazardous materials such as kitchen and bathroom cleaning products, paint, batteries, contaminated fuel and damaged fuel containers must be handled properly. Contact your local County Officials for specific handling restrictions and disposal options.

All hazardous materials should be labeled as to their contents if known!

HEATING FUELS

Checking Propane Tanks

Propane suppliers recommend homeowners contact them for an inspection prior to reusing their system. If the fire burned the tank, pressure relief valve probably opened and released the contents of the tank. Tanks, brass and copper fittings, and lines may be heat-damaged and unsafe. Valves should be turned off and remain closed until the propane suppliers inspect the system.

Checking Home Heating Oil Tanks

Heating oil suppliers recommend homeowners contact them for an inspection prior to reusing their system. The tank may have shifted or fallen from the stand and fuel lines may have kinked or weakened. Heat from the fire may have caused the tank to warp or bulge. Non-vented tanks are more likely to bulge or show signs of stress. The fire may have loosened or damaged fittings and filters. If the tank is in tact and heating oil remains in the tank, the heating oil should still be good. If you have questions on the integrity of the tank, fuel lines, tank stand, or the fuel, or need assistance in moving the tank or returning it to service, contact your fuel supplier.

MISCELLANEOUS SAFETY AWARENESS

Ash Pits

Holes created by burned trees and stumps create ash pits, which are full of hot ashes. Mark them for your safety, as they can stay hot for many days following the fire, causing serious burns. Warn your family and neighbors, especially children. Tell them to watch for ash pits and to not put hands or feet in these holes—they are hot!

Evaluation of Trees Damaged by Fire

The following information will assist you in evaluating any trees that have been scorched or burnt by the fire. Identification of the type of tree affected is important and can easily be done. Two basic types of trees exist in this area: deciduous and evergreen. Deciduous trees are broad leaf trees that lose their leaves in the fall.

In this area we have a variety of deciduous tree species. Evergreen trees have needles and in this area we mainly have Ponderosa Pine, Lodgepole Pine and Western Juniper.

First: visually check the tree stability. Any tree weakened by fire may be a hazard. Winds are normally responsible for toppling weakened trees. The wind patterns in your area may have changed as a result of the loss of adjacent tree cover. Seek professional assistance before felling trees near power lines, houses or other improvements.

If the tree looks stable:

- Visually check for burnt, partially burnt or broken branches and tree tops that may fall.
- Check for burns on the tree trunk. If the bark on the trunk of the tree has been burned off or scorched by very high temperatures completely surround the tree's circumference, the tree will not survive. This is because the living portion of the tree (cambium) was destroyed. The bark of the tree provides protection to the tree during fire. Bark thickness varies based upon tree species: check carefully to see if the fire or heat penetrated the bark. Where fire has burnt deep into the tree trunk, the tree should be considered unstable until checked.
- Check for burnt roots by probing the ground with a rod around the base of the tree and out away from the base several feet. The roots are generally six to eight inches below the surface. If you find that the roots have been burned you should consider this tree very unstable; it could easily be toppled by wind.

If the tree is scorched

- A scorched tree is one that has lost part or all of its needles. Leaves will be dry and curled. Needles will be a light red or straw colored. Healthy deciduous trees are resilient and may possibly produce new branches and leaves, as well as sprouts at the base of the tree. Evergreen trees, particularly long-needled trees, may survive when partially scorched. An evergreen tree that has been damaged by fire is subject to bark beetle attack. Please seek professional assistance concerning measures for protecting evergreen trees from bark beetle attack.

Residual Smoke In Fire Interior

Smoke may be present on the interior of the fire for several days following containment. This occurs as a result of stumps, roots, and other surface materials being exposed to changing temperatures and wind conditions. Smoke volume from these materials may fluctuate depending on weather conditions. This activity should not pose a risk and smoke will continue to dissipate until materials are fully consumed or extinguished by fire crews or weather.

Flooding Risk

With the recent large high intensity wildfires in Oregon certain locations within burned areas, or downhill and downstream of burned areas are much more susceptible to flash flooding and debris flows. Even areas that are not traditionally flood prone are at risk due to changes to the landscape caused by wildfire. Rainfall that would normally be absorbed will run off extremely quickly after a wildfire, as burned soil can be as water repellant as pavement. As a result, much less rainfall is required to produce a flash flood. A good rule of thumb is, if you can look uphill from where you are and see an area burned by wildfire, you are at risk.

Preparing for Flooding

In the event of moderate to heavy rainfall, do not wait for a flash flood warning in order to take steps to protect life and property. Thunderstorms that develop over the burned area may begin to produce flash flooding and debris flows before a warning can be issued. If you are in an area vulnerable to flooding and debris flows, plan in advance and move away from the area. There may be very little time to react once the storms and rain start.

- Have an evacuation/escape route planned that is least likely to be impacted by Flash Flooding or Debris Flows
- Have an Emergency Supply Kit available
- Stay informed before and during any potential event; knowing where to obtain National Weather Service (NWS) Outlooks, Watches and Warnings via the NWS Pendleton Website, Facebook, Twitter, or All Hazards NOAA Weather Radio
- Be alert if any rain develops. Do not wait for a warning to evacuate should heavy rain develop.
- Call 911 if you are caught in a Flash Flood or Debris Flow
- Contact local officials for additional risk information and potential mitigation efforts
- Contact The US Army Corps of Engineers regarding their Silver Jackets Program