MEMORANDUM

DATE: October 7, 2019

TO: Wildfire Mitigation Advisory Committee (WMAC)

FROM: Project Management Team

RE: Introduction / October 14th Meeting Materials and Preparation

I. Background

The Deschutes County Board of Commissioners (Board) 2019-20 Goals and Objectives includes a Safe Communities Goal to “Protect the community through planning, preparedness and delivery of coordinated services.” One objective to achieve this goal is to “Collaborate with partners to prepare for and respond to emergencies and disasters.” The Community Development Department's (CDD) 2019-20 Work Plan includes an action item to implement this goal and objective: “Consider implementing wildfire mitigation recommendations from the University of Oregon's Community Service Center (CSC) code audit, coordinate with the County Forester, and consider adopting a new Wildfire Hazard Zone.”

Staff engaged the Board in the fall of 2018 to discuss the CSC's code audit. The timing was fortuitous in that the State Building Codes Division (BCD) was considering an amendment to the Oregon Residential Specialty Code (ORSC) that would address fire hardening measures. Staff brought the proposed amendment, R-327.4, to the Board's attention as well. The Board directed staff to track R-327.4 and revisit options in 2019.

The BCD approved R-327.4 in January 2019, and allowed jurisdictions the flexibility to decide whether and how to implement the regulations. If local jurisdictions elect to adopt R-327.4 there is a requirement to create a Wildfire Hazard Zone Map based on state law. In February 2019, the Board directed staff to explore how R-327.4 might be implemented and where in the County, including potential impacts and key issues. Next, staff created concept Wildfire Hazard Zone Maps based on R-327.4 criteria. Specifically, per OAR 629-044-0200, counties must apply the Oregon Department of Forestry (ODF) scoring criteria (weather, slope, fuel hazard, and fuel distribution) to an “appropriate geographic areas” map.

County Forester Ed Keith and CDD staff conducted a stakeholders meeting in May 2019, including fire officials, City of Bend Building and Deputy Building Officials, Planning Commissioners and others to present and invite feedback on the conceptual wildfire hazard zone maps. Staff summarized and presented the stakeholders’ comments to the Board in July 2019. The Board determined establishing an ad-hoc committee would be the best option to review and recommend a Wildfire Hazard Zone Map; whether, where, and how to implement R-327.4; and potential land use wildfire mitigation strategies.
II. Committee Purpose and Decision Points

The Board appointed the WMAC in September 2019 to review and provide recommendations on a Deschutes County Wildfire Hazard Zone / Map, Oregon Revised Specialty Code (ORSC) R-327.4 Wildfire Hazard Mitigation, and land use regulations over approximately four (4) months and bimonthly meetings.

The purposes of the WMAC include the following objectives:

1. Recommend an updated Deschutes County Wildfire Hazard Zone / Map based on the Oregon Department of Forestry's (ODF) criteria in Oregon Administrative Rules (OAR) 629-044-0200 (weather, slope, fuel hazard, fuel distribution);

2. Review and recommend whether and how to apply R-327.4 construction standards in areas under Deschutes County's building jurisdiction, which include the unincorporated County, and in the cities of Sisters and La Pine; and

3. Review and recommend whether and where to propose new land use regulations based on the University of Oregon's Community Service Center audit of Deschutes County Code, and other sources agreed to by the committee and project management team.

The WMAC Charter is provided as Attachment 1. Staff asks committee members to read the charter thoroughly, and on October 14th, come prepared with any questions or concerns. It is important for committee members to understand their task so that meetings can run efficiently and an effective outcome is produced for the Board's consideration.

III. Oregon Public Meeting Laws

The WMAC is a Board-appointed committee and, as such, is subject to the Oregon Public Meetings Law. This statute requires open and transparent meetings where recommendations may be made that could impact the public. “A Quick Reference Guide to Oregon’s Public Meetings Law” is provided as Attachment 2. The following list provides key takeaways that each WMAC member should be aware of.

- The public shall have a reasonable notice of the time, place, and agenda of the meetings.
- The meeting must be made accessible to all members of the public.
- Official actions must be taken by a public vote and each member's vote must be recorded.
- Minutes shall be taken that cover: the names of members present, motions/proposals, results of votes, substance of discussion, and reference to any document discussed.

1 Oregon Revised Statutes 192.610 – 192.690.
When a quorum is present of WMAC members, i.e., six (6) members or more, public meeting rules shall be adhered to. If any member of the committee has a question or concern about public meeting laws, please contact a staff person as soon as possible.

IV. Oregon State Building Code R-327.4

As stated previously, the BCD adopted R-327.4 Wildfire Hazard Mitigation amendments to the ORSC in January 2019. R-327.4, Attachment 3, is optional for local governments to choose to implement for fire hardening structures in areas mapped as wildfire hazard zones. Political subdivisions within Deschutes County’s building jurisdiction such as the cities of La Pine and Sisters may locally adopt or opt-out of such rules independently from the County.

Oregon Administrative Rule (OAR) Chapter 629 Division 44 prescribes specific factors that determine how wildfire zones shall be established. For reference, OAR 629.44 is provided as Attachment 4. The factors that determine a wildfire hazard zone are summarized below.

- Weather
- Topography
- Vegetative Fuel Type
- Vegetative Fuel Distribution

During the first two meetings, staff will explain and ensure the committee understands how wildfire hazard zones are established, including the flexibilities provided to the County. One of the most important tasks assigned to the WMAC is to consider the right scale to identify wildfire hazard zones.

To help synthesize how wildfire hazard zones are created, staff created a summary which is provided as Attachment 5. Please bring this document to each meeting as it will act as a quick reference guide.

If adopted by a jurisdiction, R-327.4 requires new construction in a wildfire hazard zone to use certain types of construction materials and incorporate specific designs for roofing, ventilation, exterior walls, siding, overhanging projections, porches, exterior ceilings, decking surfaces, windows/skylights and doors.

V. CSC’s Natural Hazard Audit

The Planning Division contracted with University of Oregon in 2015 to review the Comprehensive Plan and the Zoning code as they pertain to natural hazards. The assessment was limited to wildfire and flooding mitigation standards in Titles 15 (Building and Construction), 18 (County Zoning) and 19 (Bend Urban Area Ordinance). The consulting team worked closely with the County’s Certified Floodplain Manager, County Forester, and Project Wildfire Coordinator. They also conducted a national review of model ordinances and best management practices as part of their study. The final report highlighted potential changes to update the zoning code (Attachment 6). Table 1, below, highlights the wildfire mitigation recommendations within the report. The committee’s charge will be to review the strategies (Table 1) and provide recommendations to the Board for future consideration. The committee will not develop or provide specific recommendations on the details (i.e., code requirements) of each strategy. Following the WMAC’s work, the Board will consider whether to initiate separate processes to develop and initiate programs/code amendments to adopt and implement the strategies.
### Table 1 – CSC’s Recommendations for Wildfire Mitigation

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
<th>Staff Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roofing Standards</strong></td>
<td>Specifically prohibit shake roofs in wildfire-prone areas. Currently, DCC allows shake roofs if they are Class C or higher, which means the shake roof is treated with fire-resistant material. However, the CSC study found the treatment deteriorates quickly in the County’s climate and it is uncommon for homeowners to retreat their homes as often as necessary.</td>
<td>The Oregon Residential Specialty Code section R327.3.1.1 currently requires a minimum of a Class C roof covering and prohibits the use of untreated wood shingle and shake roofs in the Wildfire Hazard Zone. Fire-retardant-treated wood roof coverings are tested and meet the durability requirements in accordance with ASTM D 2898. The factory treated roof coverings are supposed to maintain their fire resistance for the life of the roof covering without the need for additional maintenance.</td>
</tr>
<tr>
<td><strong>Steep Slopes</strong></td>
<td>Establish maximum slope grade, e.g., 25%.</td>
<td>Increased slope equals increased destruction during a fire event. Could allow for development on steep slopes with requirement for defensible space.</td>
</tr>
<tr>
<td><strong>Defensible Space</strong></td>
<td>Establish a 100-200 foot defensible space zone around a new development.</td>
<td>According to the CSC report, the most effective way to reduce the risk of structural loss from wildfires is defensible space free from flammable materials. One example could be the National Fire Protection Association (NFPA) Zone 1, 2, and 3 standards. Another option is the OR Defensible Space Law.</td>
</tr>
<tr>
<td><strong>Wildfire Mitigation Plan for Subdivisions</strong></td>
<td>A wildfire mitigation plan could be required for all new partitions/subdivisions. Such mitigation plans could include road access, building separation, water supply, fire sprinkler systems, fire-resistant landscaping, in addition to a mitigation and maintenance plan.</td>
<td>Best practices would require new partitions/subdivisions to adopt standards like NFPA 1141, 1144, and/or Firewise. Standards could be required within Title 17, Sections: “Subdivisions”, “Master Developments”, or “Destination Resorts”. A Fire Prevention and Control Plan would ensure that subdivisions have clear plans in place before development. Clear standards and requirements for this plan would assist developers in the project planning process and ensure that maintenance of these standards remain in perpetuity.</td>
</tr>
</tbody>
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3 [https://www.oregon.gov/ODF/Fire/Pages/UrbanInterface.aspx](https://www.oregon.gov/ODF/Fire/Pages/UrbanInterface.aspx)
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<th>Issue</th>
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<th>Staff Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Fire Protection from District</td>
<td>Before a development is permitted, a written statement from a fire district indicating they will serve the property would be required. If a property is not within a fire district, a contract with a district would need to be established indicating fire protection will be provided for the life of the structure.</td>
<td>The CSC report acknowledges this is not a pressing issue but states with continued population growth into rural areas could exceed the capacity of rural fire districts. Jefferson County, Colorado, requires a written statement from fire district stating they will serve the new development.</td>
</tr>
<tr>
<td>Wildfire Mitigation Plan for Single-Family Homes</td>
<td>CDD could require a wildfire mitigation plan for all new residences to ensure homeowners are mindful of and take an active role in mitigation of risks associated with development within the wildland urban interface (WUI).</td>
<td>Wildfire mitigation plans could include a site plan depicting the location of structures, defensible space management, driveway access for emergency vehicles, water supply for firefighting, and other pertinent information.</td>
</tr>
<tr>
<td>Standards for Road Identification Signs</td>
<td>Enhanced protocols regarding road identification signs and addresses can help emergency responders quickly find their destinations.</td>
<td>DCC includes language to address road identification signs or markers. Both the OR Residential Specialty Code and the OR Structural Specialty Code have specific address identification requirements. Enhanced address and road sign standards could be identified and required.</td>
</tr>
<tr>
<td>Wildfire Hazard Combining Zone</td>
<td>Eliminates need to individually prescribe wildfire provisions for each base zone. The combining zone could include a number of provisions such as building materials, defensible space, and developable slopes.</td>
<td>Ashland, OR and Jefferson County, CO have implemented wildfire hazard combining zones. Wildfire Hazard Zones are currently depicted on the Wildfire Hazard Areas map and DCC 15.04.085 already implements this map to apply roofing standards in a manner identical to the function of the proposed combining district.</td>
</tr>
</tbody>
</table>

Staff will provide an overview of the University’s report and how it fits into the WMAC’s tasks on October 14.

**VI. Next Steps**

The WMAC is tentatively scheduled to meet ten (10) times. The Board clearly stated to staff their expectation that WMAC members attend all or very nearly all meetings. Please see the WMAC Charter (Attachment 1) for the meeting schedule. A project specific website was created to share meeting materials and other relevant information: [www.deschutes.org/wildfirecommittee](http://www.deschutes.org/wildfirecommittee). A meeting packet will be emailed to all WMAC members approximately one week prior to each meeting. Staff encourages committee members to thoroughly read the packet materials before each meeting and ask for any additional information or other needs that will help committee members make informed decisions.
Once the committee has finalized their recommendations to the Board, staff will create a report that includes the WMAC's suggestions as well as a summary of other noteworthy committee information.

**Attachments**

1. WMAC Charter  
2. Oregon Public Meeting Laws  
3. R-327.4 Code  
4. Oregon Administrative Rule Chapter 660 Division 24  
5. Summary of Wildfire Hazard Zones  
6. University of Oregon Natural Hazards Audit (*Floodplain Chapters Omitted*)
WILDFIRE MITIGATION ADVISORY COMMITTEE

September 2019

Background

The Deschutes County Board of Commissioners (Board) 2019-20 Goals and Objectives includes a Safe Communities Goal to “Protect the community through planning, preparedness and delivery of coordinated services.” One objective to achieve this goal is to “Collaborate with partners to prepare for and respond to emergencies and disasters.”

The Community Development Department’s (CDD) 2019-20 Work Plan includes an action item to implement this goal and objective: “Consider implementing wildfire mitigation recommendations from the University of Oregon’s Community Service Center (CSC) code audit, coordinate with the County Forester, and consider adopting a new Wildfire Hazard Zone.”

In addition, in January 2019, the Oregon Building Codes Division (BCD) adopted R327.4 Wilfire Hazard Mitigation amendments to the Oregon Residential Specialty Code. R327.4 is optional for local governments to choose to implement for fire hardening structures in areas mapped as wildfire hazard zones in compliance with the Oregon Department of Forestry’s standards.

The Board has discussed and considered approaches to updating the wildfire hazard zone / map and adopting building and land use mitigation standards over nearly the past year. In summer 2019, the Board decided to establish a Wildfire Mitigation Advisory Committee (WMAC) to provide recommendations on updating the County’s Wildfire Hazard Zone / Map and whether the County should implement new building code standards and land use regulations to mitigate wildfire hazards and improve wildfire safety.

Mission and Purpose

The Board appointed the WMAC in September 2019 to review and provide recommendations on a Deschutes County Wildfire Hazard Zone / Map, Oregon Revised Specialty Code (ORSC) R327.4 Wildfire Hazard Mitigation, and land use regulations over approximately four (4) months and bimonthly meetings.

The purposes of the WMAC include the following objectives:

1. Recommend an updated Deschutes County Wildfire Hazard Zone / Map based on the Oregon Department of Forestry’s (ODF) criteria in Oregon Administrative Rules (OAR) 629-044-0200 (weather, slope, fuel hazard, fuel distribution);
2. Review and recommend whether and how to apply R327.4 construction standards in areas under Deschutes County’s building jurisdiction, which include the unincorporated County, and in the cities of Sisters and La Pine; and

3. Review and recommend whether and where to propose new land use regulations based on the University of Oregon’s Community Service Center audit of Deschutes County Code, and other sources agreed to by the committee and project management team.

Structure and Membership

The WMAC consists of 12 voting members appointed by the Board. A project management team consisting of county and city staff will support the WMAC in the following areas:

- Meeting facilitation and communications
- Website updates and maintenance
- Provide an overview of public meeting laws and ethics, education (i.e., applicable laws and rules), technical information and memorandums, and options for decision making
- Meeting minutes

Record Keeping and Transparency

As an official public body, meeting minutes will be taken and posted on a designated website for this project. Meeting minutes will be shared via email with all members prior to the meeting for review, and will be approved as drafted or modified by the committee at the subsequent meeting. This Charter will be posted to the project website and remain a publically available document for as long as the project exists.

Membership

The WMAC is comprised of members listed in the table below. Membership is at the will of the Board. The committee may or may not be comprised of equal representation from different perspectives, affiliations, etc. A lack of equal representation does not diminish the integrity of the process as all opinions, perspectives, and views will be captured in meeting minutes and project management teams reports to the Board.

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization / Background</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brent Landels</td>
<td>Realtor – Re/Max</td>
<td>Bend</td>
</tr>
<tr>
<td>Brian Braddock</td>
<td>Farmers Insurance (Retired)</td>
<td>Bend</td>
</tr>
<tr>
<td>Geoffrey Reynolds</td>
<td>Home Owner</td>
<td>Bend</td>
</tr>
<tr>
<td>Jim Beeger</td>
<td>Planning Commissioner</td>
<td>Bend</td>
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<tr>
<td>Jim Figurski</td>
<td>Landscape Architect</td>
<td>Bend</td>
</tr>
<tr>
<td>Jodie (Joe) Foran</td>
<td>Fuels Management – BLM (Retired)</td>
<td>La Pine</td>
</tr>
<tr>
<td>Karna Gustafson</td>
<td>Central OR Builders Association</td>
<td>Bend</td>
</tr>
<tr>
<td>Ken Kehmna</td>
<td>Redmond Fire and Rescue</td>
<td>Redmond</td>
</tr>
<tr>
<td>Martha Meeker</td>
<td>Home Owner</td>
<td>Sisters</td>
</tr>
</tbody>
</table>
Recommendations

The project management team and facilitator will make every effort to facilitate a process to develop and approve recommendations by consensus. When necessary, recommendations will be made by majority vote. Members not present at the time of a vote will not participate in the vote. The project management team will summarize committee recommendation votes to the Board in addition to meeting minutes to articulate the various opinions on issues. The goal will be to achieve consensus or clearly explain areas where disagreements exist and the reasons for different opinions.

Ground Rules and Expectations

1. Attendance. The WMAC strives for full attendance at every meeting. Members must be able to attend at least 70% of the scheduled meetings based on the tentative schedule.
2. Work and progress. WMAC members should expect to complete work between meetings. Members will make every effort to prepare for meetings, ask the project management team for assistance as needed between meetings. Members will notify the PMT if unable to attend a meeting.
3. Think collaboratively. The WMAC will attempt to find common ground in developing recommendations.
4. Inclusivity and Civility. WMAC members are expected to create space for diverse or contradictory opinions, and support collaboration in all meetings.

Meeting Times, Quorum, Participation, Tentative Schedule

WMAC meetings are tentatively scheduled for every other Monday from 4:00-6:30 p.m. at the Deschutes Services Building, 1300 NW Wall Street, Bend, OR. Meetings that conflict with a holiday may be rescheduled to a prior or subsequent Monday at the same time and location. Approximately 10 meetings are anticipated. Meeting agendas will be posted on the project website and provided to WMAC members via email approximately one (1) week prior to each meeting.

Regular check-ins with the Board may occur monthly or more frequently if necessary.

A quorum (majority) of the members shall be required to make recommendations.

TENTATIVE SCHEDULE

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics of Discussion</th>
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<tbody>
<tr>
<td>October 14</td>
<td>Orientation, Introductions, Purpose/Charter, Ground Rules, Overview of Draft Wildfire Hazard Maps/Zones, R327, Land Use Standards, Major Decision Points.</td>
</tr>
<tr>
<td>October 21</td>
<td>Wildfire Hazard Maps/Zones: Review and discuss concepts; develop additional concepts?</td>
</tr>
<tr>
<td>Date</td>
<td>Activity Description</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>November 4</td>
<td>Review and discuss draft Wildfire Hazard Map/Zone Concepts; Identify and discuss: R327 Decision Points, Questions, and Informational Needs to make recommendations.</td>
</tr>
<tr>
<td>November 18</td>
<td>Discuss and potentially recommend Wildfire Hazard Maps/Zones; Discuss R327 Decision Pts.</td>
</tr>
<tr>
<td>December 2</td>
<td>Finalize Wildfire Hazard Map/Zone; Discuss and potentially recommend R327 Decision Pts.</td>
</tr>
<tr>
<td>December 16</td>
<td>Finalize R327 recommendations; Identify and discuss Land Use Standards Decision Points, Information Needs.</td>
</tr>
<tr>
<td>January 6</td>
<td>Review and discuss Land Use Standards.</td>
</tr>
<tr>
<td>January 13</td>
<td>Finalize Land Use Standards recommendations.</td>
</tr>
<tr>
<td>January 27</td>
<td>If necessary, finalize any outstanding recommendations.</td>
</tr>
</tbody>
</table>
A QUICK REFERENCE GUIDE TO OREGON’S PUBLIC MEETINGS LAW

For local and state officials, members of Oregon boards and commissions, citizens, and non-profit groups

This guide is published as a public service by Open Oregon: a Freedom of information Coalition and the Oregon Attorney General’s office.
A Time Saving Reference

This guide is brought to you free of charge as a joint project between Open Oregon: A Freedom of Information Coalition and Oregon Attorney General Hardy Myers. Funding for this booklet came from the National Freedom of Information Coalition through a grant from the John S. and James L. Knight Foundation.

How to Use This Guide

This summary is intended as a quick reference to the Oregon Public Meetings Law. The entire law may be found in Oregon Revised Statutes 192.610 to 192.690. Additional information may be obtained by sending an e-mail request to info@open-oregon.com or visiting www.open-oregon.com

For a comprehensive analysis of the law, refer to the latest edition of the Attorney General’s Public Records and Meetings Manual, available for a nominal fee by calling (503) 378-2992 or writing to Department of Justice, Administrative Services, 1162 Court Street NE, Salem, Oregon 97301-4096.

What is Open Oregon?

Open Oregon: A Freedom of Information Coalition is a non-profit educational and charitable organization with a single purpose: to assist and educate the general public, students, educators, public officials, media and legal professional to understand and exercise:

• Their rights to open government.
• Their rights and responsibilities under the Oregon public meetings and records laws.
• Their rights under the federal Freedom of Information Act.

Open Oregon is a 501(c)(3) non-profit corporation.
The Spirit of Oregon's Public Meetings Law

The Value of Openness

Understanding the letter of the Public Meetings Law is critical. Equally important is understanding and committing to the spirit of that law. Public bodies should approach the law with openness in mind. Open meetings help citizens understand decisions and build trust in government. It is better to comply with the spirit of the law and keep deliberations open.
“Government accountability depends on an open and accessible process.”

- Hardy Myers
  Oregon Attorney General

“Public bodies must conduct business in public - it’s really that simple.”

- Bill Bradbury
  Oregon Secretary of State
  Honorary Co-Chair, Open Oregon

“Oregon needs to protect its tradition of openness.”

- Dave Frohnmayer
  President, University of Oregon
  Honorary Co-Chair, Open Oregon
Oregon’s Public Meetings Law

“Open government” or “sunshine” laws originally were enacted nationwide in the early 1970s because of growing public unhappiness with government secrecy. As a result, every state and the District of Columbia enacted laws requiring government to conduct its business openly, rather than behind closed doors.

Open government laws benefit both government and the public. Citizens gain by having access to the process of deliberation – enabling them to view their government at work and to influence its deliberations. Government officials gain credibility by permitting citizens to observe their information-gathering and decision-making processes. Such understanding leads to greater trust in government by its citizens. Conversely, officials who attempt to keep their deliberations hidden from public scrutiny create cynicism, erode public trust and discourage involvement.

Policy

Oregon’s Public Meetings Law was enacted in 1973 to make sure that all meetings of governing bodies covered by the law are open to the public. This includes meetings called just to gather information for subsequent decisions or recommendations.

The law also requires that the public be given notice of the time and place of meetings and that meetings be accessible to everyone, including persons with disabilities.

The Public Meetings Law guarantees the public the right to view government meetings, but not necessarily to speak at them. Governing bodies set their own rules for citizen participation and public comment.
Who is covered?

Because questions often arise about what groups must comply with the public-meetings law, it is useful to look at the definitions in the law. The law says that any “governing body” of a “public body” is required to comply. It offers these definitions:

- A “public body” is any state, regional, or local governmental board, department, commission, council, bureau, committee, subcommittee, or advisory group created by the state constitution, statute, administrative rule, order, intergovernmental agreement, bylaw or other official act.

- A “governing body” is two or more members of a public body who have the authority to make decisions for or recommendations to a public body on policy or administration. A group without power of decision is a governing body when authorized to make recommendations to a public body, but not when the recommendations go to individual public officials.

**Example**

- A school board must meet in public.
- So must most advisory committees that the school board creates, such as a budget committee.
- But if the school board chair asks several business leaders to meet with him to discuss future building needs, that meeting may be held in private.

Private bodies, such as non-profit corporations, do not have to comply with the public-meetings law, even if they receive public funds, contract with governmental bodies or perform public services.

**Example**

- A school district contracts with Regence BlueCross BlueShield of Oregon to provide health insurance for district employees. The BlueCross BlueShield board of directors is not required to meet in public.

Public agencies contracting with private bodies may require a private body to comply with the law for pertinent meetings. Federal agencies are not subject to Oregon’s Public Meetings Law.
What is a Public Meeting?

A public meeting is the convening of any governing body for which a quorum is required to make or deliberate toward a decision on any matter, or to gather information. Decisions must be made in public, and secret ballots are prohibited. Quorum requirements may vary among governing bodies.

**Example**

- A county commission’s goal-setting retreat is a public meeting if a quorum is present and they discuss official business.
- A training session for the commissioners is not a public meeting, unless a quorum is present and the commissioners discuss official business.
- A staff meeting absent a quorum of commissioners, whether called by a single commissioner or a non-elected official, is not a public meeting.

Meetings accomplished by telephone conference calls or other electronic means are public meetings. The governing body must provide public notice, as well as a location where the public may listen to or observe the meeting.

Governing bodies must hold their meetings within the geographic boundaries of their jurisdiction. However, a governing body may meet elsewhere if there is an actual emergency requiring immediate action or to hold a training session, when no deliberation toward a decision is involved.

**Example**

- A library board is free to rotate meetings at different libraries in its district, but it may not meet outside its district.

Federal and state law requires that meetings be held in places accessible to individuals with mobility and other impairments.
What is Exempt from the Law?

On-site inspections, staff meetings and gatherings of associations to which a public body or its members belong are not considered public meetings. Chance social gatherings are not considered meetings as long as no official business is discussed.

Example

• Three out of five city councilors inspect a new landfill site. Their inspection does not constitute a public meeting, unless they deliberate toward a decision on a city matter.

• Later, the three city councilors attend a League of Oregon Cities conference. Again, this is not a public meeting, unless the councilors discuss official city business.

• That evening, the three councilors chat during a concert intermission. As long as they talk about the music, this is not a public meeting. But if they stray into discussion of official city business, then it is.

Also exempt from the Public Meetings Law are:
• Meetings of state or local lawyers assistance committees.
• Meetings of medical peer review committees.
• Meetings of multidisciplinary teams reviewing child abuse and neglect fatalities.
• Judicial proceedings. However, see Oregon Constitution, Section 10.
• Review by the Workers’ Compensation Board and the Employment Appeals Board of hearings on contested cases.
• Meetings of the Energy Facility Siting Council when it reviews and approves security programs.
• The Oregon Health and Science University regarding presidential selection process, sensitive business matters, or meetings of faculty or staff committees.
• Mediation by the agricultural mediation service program.
For some entities, the deliberation process alone is exempt, although information-gathering and decision-making must be public. This applies to the State Board of Parole, the Psychiatric Security Review Board, and state agencies conducting hearings on contested cases under the Administrative Procedures Act.

**Notice of Meetings**

Governing bodies must give notice of the time, place and agenda for any regular, special or emergency meeting.

Public notice must be reasonably calculated to give actual notice to interested persons and media who have asked in writing to be notified of meetings and general notice to the public at large.

Governing bodies wishing to provide adequate notice should strive to provide as much notice as possible to ensure that those wishing to attend have ample opportunity – a week to 10 days for example.

At least 24-hour notice to members of the governing body, the public and media is required for any special meeting, unless the meeting is considered an emergency meeting. Appropriate notice is required for emergency meetings and should include phone calls to media and other interested parties. Notice for emergency meetings must also cite the emergency.

A meeting notice must include a list of the principal subjects to be considered at the meeting. This list should be specific enough to permit citizens to recognize matters of interest. However, discussion of subjects not on the agenda is allowed at the meeting.

**Example**

*The State Board of Higher Education plans to discuss building new college campus in Burns. An agenda item that says “Discussion of public works” would be too general. Instead, the agenda should say something like “Discussion of proposed Burns campus.”*
Executive Sessions

Governing bodies are allowed to exclude the public – but generally not the media – from the discussion of certain subjects. These meetings are called executive sessions.

Executive sessions may be called during any regular, special or emergency meeting. A governing body may set a meeting solely to hold an executive session as long as it gives appropriate public notice. Notice requirements for executive sessions are the same as for regular, special or emergency meetings. However, labor negotiations conducted in executive sessions are not subject to public notice requirements.

Notice of an executive session must cite the specific law that authorizes the executive session. This authorization also must be announced before going into the executive session.

Governing bodies may formally specify that the media not disclose information that is the subject of the executive session. Governing bodies should not discuss topics apart from those legally justifying the executive session. Media representatives may report discussions that stray from legitimate executive session topics and are not required to inform the governing body when they intend to do so.

No final action may be taken in executive session. Decisions must be made in public session. If a governing body expects to meet publicly to make a final decision immediately after an executive session, it should try to announce the time of that open session to the public before the executive session begins.

Example

- City councilors meet in executive session to discuss the city manager’s performance. A local reporter attends. During the meeting, the councilors discuss whether the city should put a bond measure on the next ballot. The reporter may write a story on the council’s bond-measure discussion, because that discussion was not allowed under the executive session rules. The reporter may not write about the city manager’s performance.
Executive Sessions Criteria

Executive sessions are allowed only for very limited purposes. Those include:

1. **To consider the initial employment of a public officer**, employee or staff member, but not to fill a vacancy in an elected office, or on public committees, commissions or advisory groups. These sessions are allowed only if the position has been advertised, standardized procedures for hiring have been publicly adopted, and the public has had an opportunity for input on the process. Executive sessions are not allowed to consider general employment policies.

2. **To consider dismissal**, discipline, complaints or charges against a public official, employee, official, staff or individual agent, unless that person requests a public hearing.

3. **To review and evaluate the job performance** of a chief executive officer, or other officer or staff member, unless that person requests an open hearing. Such evaluation must be pursuant to standards, criteria and policy directives publicly adopted by the governing body following an opportunity for public comment. The executive session may not be used for the general evaluation of agency goals, objectives, programs or operations, or to issue any directive to personnel on the same.

4. **To deliberate with persons designated to conduct labor negotiations.** The media may be excluded from these sessions.

5. **To conduct labor negotiations** if both sides request that negotiations be in executive session. Public notice is not required for such meetings.

6. **To consider records** that are exempt by law from public disclosure.

7. **To consult with counsel** concerning litigation filed or likely to be filed against the public body. Members of the media that are a party to that litigation, or represent a media entity that is a party, may be excluded.

8. **To consult with persons designated to negotiate** real property transactions.
9. **To discuss matters of trade** when the governing body is in competition with other states or nations.

10. **To negotiate with a private person** or business regarding public investments.

11. **To discuss matters of medical competency** and other matters pertaining to licensed hospitals.

12. **To consider information obtained by a health professional regulatory board or State Landscape Architect Board** as part of an investigation of licensee or applicant conduct.

13. **To discuss information relating to the security of:** a nuclear power plant; transportation of radioactive materials; generation, storage or conveyance of electricity, gas hazardous substances, petroleum, sewage or water; and telecommunications and data transmission.

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**Media at Executive Sessions**

Media representatives must be allowed to attend executive sessions, with three exceptions. Media may be excluded from:

- Strategy discussions with labor negotiators.
- Meetings to consider expulsion of a student or to discuss students' confidential medical records.
- Meetings to consult with counsel concerning litigation to which the media or media representative is a party.

A governing body may require that specific information not be reported by the media. This should be done by declaration of the presiding officer or vote. In the absence of this directive, the executive session may be reported. Any discussion of topics apart from those legally justifying the executive session may be reported by the media.
The media also is free to report on information gathered independently from executive session, even though the information may be the subject of an executive session.

**Example**

- A reporter attends the executive session on the city council’s discussion of the city manager’s performance. Afterwards the reporter asks a councilor what she thinks of the city manager’s performance. She shares her criticism. The reporter may use that interview to develop a story, even though the reporter first heard the information at the executive session.

**Minutes**

Written, sound, video or digital recording of minutes are required for all meetings.

The meetings law says minutes must be made available within a “reasonable time” after each meeting, but does not specify the time. Generally, this time frame should not exceed three weeks. Minutes must be preserved for a “reasonable time.” This is generally interpreted to be at least one year. Minutes of many governing bodies are subject to records retention rules and schedules established by the State Archivist.

**Minutes must indicate:**

- Members present
- All motions, proposals, resolutions, orders, ordinances and measures proposed and their disposition.
- The result of all votes by name of each member (except for public bodies consisting of more than 25 members). No secret ballots are allowed.
- The substance of discussion on any matter.
- A reference to any document discussed at the meeting.

Minutes are not required to be a verbatim transcript and the meeting does not have to be tape recorded unless so specified by law. Minutes are public record and may not be withheld from
the public merely because they will not be approved until the next meeting. Minutes of executive sessions are exempt from disclosure under the Oregon Public Records Law. Governing bodies are allowed to charge fees to recover their actual cost for duplicating minutes, tapes and records. A person with a disability may not be charged additional costs for providing records in larger print.

**Enforcement**

County district attorneys or the Oregon Attorney General's Office may be able to answer questions about possible public meetings law violations, although neither has any formal enforcement role and both are statutorily prohibited from providing legal advice to private citizens.

Any person affected by a governing body's decision may file a lawsuit in circuit court to require compliance with or prevent violations of the Public Meetings Law. The lawsuit must be filed within 60 days following the date the decision becomes public record.

The court may void a governing body's decision if the governing body intentionally or willfully violated the Public Meetings Law, even if the governing body has reinstated the decision in a public vote. The court also may award reasonable legal fees to a plaintiff who brings suit under the Public Meetings Law.

Complaints of executive session violations may be directed to the Oregon Government Ethics Commission, 3218 Pringle Road SE, Suite 220, Salem OR, 97302-1544; 503-378-5105, for review, investigation and possible imposition of civil penalties.

Members of a governing body may be liable for attorney and court costs both as individuals or as members of a group if found in willful violation of the Public Meetings Law.
For additional copies of this guide or information about Open Oregon, contact:

Open Oregon: A Freedom of information Coalition
PO Box 172, Portland, Oregon 97207-0172
info@open-oregon.com
www.open-oregon.com

Additional resources:
• Oregon Attorney General’s Public Records and Meetings Manual, available by calling 503-378-2992 or writing to Department of Justice, 1162 Court Street NE, Salem, OR 97301-4096; www.doj.state.or.us/oregonians/pubs.shtml

• Oregon Revised Statures 192.610 to 162.690, the Oregon Public Meetings Law, available in most libraries and on the internet at www.leg.state.or.us.

• Oregon Newspaper Publishers Association, 503-624-6397. Offers legal advice to member newspapers and general information about public records and meetings requirements; www.orenews.com

• League of Oregon Cities, 1201 Court St. NE, Salem, OR 97301. 503-588-6550; www.orcities.org

• Association of Oregon Counties, 1201 Court St. NE, Salem, OR 97301. 503-585-8351; www.aocweb.org

• Oregon School Boards Association, 1201 Court St. NE, Salem, OR 97301. 503-588-2800; www.osba.org

• Special Districts Association of Oregon, PO Box 12613, Salem, OR 97301-0613, 503-371-8667; www.sdao.com

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November 2007
SECTION R327
WILDFIRE HAZARD MITIGATION

R327.1 Purpose. The purpose of this section is to provide minimum standards for dwellings and their accessory structures located in or adjacent to vegetated areas subject to wildfires, to reduce or eliminate hazards presented by such fires.

R327.2 Scope. The provisions of this section shall apply to all dwellings required to be protected against wildfire by a jurisdiction which has adopted wildfire zoning regulations. The additional provisions of Section R327.4 shall apply when a local municipality has adopted a local ordinance specifically recognizing Section R327.4 and consistent with Sections R327.4 through R327.4.8.

R327.3 Determination. Wildfire hazard zone. A wildfire hazard zone is an area legally determined by a jurisdiction to have special hazards caused by a combination of combustible natural fuels, topography and climatic conditions that result in a significant risk of catastrophic fire over relatively long periods each year. Wildfire hazard zones shall be determined using criteria established by the Oregon Department of Forestry.

R327.3.1 Wildfire hazard zone requirements. Dwellings and their accessory structures shall be protected against wildfire by the following requirement in addition to other requirements of this code. The provisions of Section R327.4 apply only to qualifying lots identified in Section R327.4.1.

Exception: Nonhabitable detached accessory structures, with an area of not greater than 400 square feet, located at least 50 feet from all other structures on the lot.

R327.3.1.1 Roofing. Roofing shall be asphalt shingles in accordance with Section R905.2, slate shingles in accordance with Section R905.6, metal roofing in accordance with Section R905.4, tile, clay or concrete shingles in accordance with Section R905.3 and other approved roofing which is deemed to be equivalent to a minimum Class C rated roof covering. Untreated wood shingle and shake roofs are not permitted when the construction site is in a wildfire hazard zone as determined by Section R327.3.

R327.3.1.2 Reroofing or repair of roofing of existing buildings. When 50 percent or more of the roof covering of any building is repaired or replaced within one year, the roof covering shall be made to comply with this section and attic ventilation shall be made to comply with this code. Ventilation openings shall be protected with corrosion-resistant wire mesh, not greater than 1/2-inch (12.7 mm) or less than 1/8-inch (3.2 mm) in any dimension.

R327.4 Scope of additional wildfire hazard mitigation requirements. The provisions of Section R327.4 shall apply to new dwellings and their accessory structures located in a wildfire hazard zone on a qualifying lot of record created on or after the effective date in the local adopting ordinance.

R327.4.1 Qualifying lots of record. Qualifying lots of record shall meet all the following:

1. Be located in a wildfire hazard zone as identified by the local municipality using criteria established by the Oregon Department of Forestry. The local municipality is not required to include all areas identified by the Oregon Department of Forestry as wildfire hazard zones. The zone shall be detailed in the local adopting ordinance.

2. The local municipality shall determine in the adopting ordinance whether qualifying lots of record shall consist of individual lots or whether qualifying lots must be part of a development that contains a minimum number of lots.

3. The local municipality shall make a determination that the lot of record is either located within the identified wildfire hazard zone as determined by the jurisdiction or that it is located outside of the wildfire hazard zone as determined by the jurisdiction. Notification shall be provided in conjunction with the land use approval under ORS 197.522.

4. Application:

4.1 Lots created prior to the effective date of the local ordinance, that would otherwise qualify under the local adopting ordinance, are exempt from the requirements of the ordinance for a period of three years from the creation date of the land use approval under ORS 197.522.

4.2 For a lot created after the effective date of the local ordinance that receives notification under this section, the determination in the notification shall be valid for three years from the date of the land use approval under ORS 197.522. At the expiration of the three years, a lot of record shall be re-evaluated under the current version of the adopting ordinance prior to the issuance of a building permit.

Infill exception: Dwellings or accessory structures constructed on a lot in a subdivision, do not need to comply with Section R327.4 when at least 50 percent of the lots in the subdivision have existing dwellings that were not constructed in accordance with Section R327.4.

Nothing in the code or adopting ordinance prevents a local municipality from waiving the requirements of Section R327.4 for any lot, property or dwelling, or the remodeling, replacement or reconstruction of a dwelling within the jurisdiction.

The local municipality must include a process for resolving disputes related to the applicability of the local ordinance and this section.

R327.4.2 Definitions. The following words and terms shall, for purposes of Section R327.4, have the meanings shown herein. Refer to Chapter 2 for general definitions.
Heavy Timber. For the use in this section, heavy timber shall be sawn lumber or glue laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Heavy timber walls or floors shall be sawn or glue-laminated planks splined, tongue-and-grove, or set close together and well spiked.

Ignition-Resistant Material. A type of building material that resists ignition or sustained flaming combustion sufficiently so as to reduce losses from wildland-urban interface conflagrations under worst-case weather and fuel conditions with wildfire exposure of burning embers and small flames. Such materials include any product designed for exterior exposure that, when tested in accordance with ASTM E84 or UL 723 for surface burning characteristics of building materials, extended to a 30-minute duration, exhibits a flame spread index of not more than 25, shows no evidence of significant progressive combustion, and whose flame front does not progress more than 10½ feet (3.2 m) beyond the centerline of the burner at any time during the test.

Noncombustible Material. Any material that in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat in accordance with ASTM E136.

Wildfire. Any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property, or resources.

Wildfire Exposure. One or a combination of circumstances exposing a structure to ignition, including radiant heat, convective heat, direct flame contact and burning embers being projected by a vegetation fire to a structure and its immediate environment.

R327.4.3 Roofing. Roofing shall be asphalt shingles in accordance with Section R905.2, slate shingles in accordance with Section R905.6, metal roofing in accordance with Section R905.4, tile, clay or concrete shingles in accordance with Section R905.3 or other approved roofing which is deemed to be equivalent to a minimum Class B rated roof assembly. Wood shingle and shake roofs are not permitted in a wildfire hazard zone.

Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be fire-blocked with approved materials, or have one layer of minimum 72 pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D3909 installed over the combustible decking.

Where valley flashing is installed, the flashing shall be not less than 0.019-inch (0.48 mm) No. 26 gage galvanized sheet corrosion-resistant metal installed over not less than one layer of minimum 72 pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D3909 at least 36-inch-wide (914 mm) running the full length of the valley.

R327.4.3.1 Gutters. When required, roof gutters shall be constructed of noncombustible materials and be provided with a means to prevent accumulation of leaves and debris in the gutter.}

R327.4.4 Ventilation. Where provided, the minimum net area of ventilation openings for enclosed attics, enclosed soffit spaces, enclosed rafter spaces, and under-floor spaces shall be in accordance with Sections R806 and R408. All ventilation openings shall be covered with non-combustible corrosion-resistant metal wire mesh, vents designed to resist the intrusion of burning embers and flame, or other approved materials or devices.

Ventilation mesh and screening shall be a minimum of 1/16-inch (1.6mm) and a maximum of 1/8-inch (3.2mm) in any dimension.

R327.4.4.1 Eaves, soffits, and cornices. Ventilation openings shall not be installed on the underside of eaves, soffits, or cornices.

Exceptions:
1. The building official may approve special eave, sofit, or cornice vents that are manufactured to resist the intrusion of flame and burning embers.
2. Ventilation openings complying with the requirements of Section R327.4.4 may be installed on the underside of eaves, soffits, or cornices where the opening is located 12 feet or greater above grade or the surface below.

R327.4.5 Exterior walls. The exterior wall covering or wall assembly shall comply with one of the following requirements:
1. Noncombustible material.
2. Ignition-resistant material.
3. Heavy timber assembly.
4. Log wall construction assembly.
5. Wall assemblies that have been tested in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in ASTM E2707, complying with the conditions of acceptance listed in Section R327.4.5.2.

Exception: Any of the following shall be deemed to meet the assembly performance criteria and intent of this section:
1. One layer of 5/8-inch Type X exterior gypsum sheathing applied behind the exterior wall covering or cladding on the exterior side of the framing.
2. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure including assemblies using exterior gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

R327.4.5.1 Extent of exterior wall covering. Exterior wall coverings shall extend from the top of the foundation to the roof, and terminate at 2 inch (50.8 mm) nominal solid wood blocking between rafters at all roof overhangs, or in the case of enclosed eaves or soffits, shall terminate at the underside of the enclosure.
R327.4.5.2 Conditions of acceptance. ASTM E2707 tests shall be conducted in triplicate and the conditions of acceptance below shall be met. If any one of the three replicates does not meet the conditions of acceptance, three additional tests shall be conducted. All additional tests shall meet the following conditions of acceptance:

1. Absence of flame penetration through the wall assembly at any time during the test.
2. Absence of evidence of glowing combustion on the interior surface of the assembly at the end of the 70-minute test.

R327.4.6 Overhanging projections. All exterior projections (exterior balconies, carports, decks, patio covers, porch ceilings, unenclosed roofs and floors, overhanging buildings and similar architectural appendages and projections) shall be protected as specified in this section.

R327.4.6.1 Enclosed roof eaves, soffits, and cornices. The exposed underside of rafter or truss eaves and enclosed soffits, where any portion of the framing is less than 12 feet above grade or similar surface below, shall be protected by one of the following:

1. Noncombustible material.
2. Ignition-resistant material.
3. One layer of 5/8-inch Type X exterior gypsum sheathing applied behind an exterior covering on the underside of the rafter tails, truss tails, or soffit.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the rafter tails or soffit including assemblies using exterior gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. Soffit assemblies with a horizontal underside that meet the performance criteria in Section R327.4.6.5 when tested in accordance with ASTM E2957.

Exception: Architectural trim boards.

R327.4.6.2 Exterior patio and porch ceilings. The exposed underside of exterior patio and porch ceilings greater than 200 square feet in area and less than 12 feet above grade shall be protected by one of the following:

1. Noncombustible material.
2. Ignition-resistant material.
3. One layer of 5/8-inch Type X exterior gypsum sheathing applied behind the exterior covering on the underside of the ceiling.
4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the ceiling assembly including assemblies using exterior gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
5. Porch ceiling assemblies with a horizontal underside that meet the performance criteria in Section R327.4.6.5 when tested in accordance with the test procedures set forth in ASTM E2957.

Exception: Heavy timber structural columns and beams do not require protection.
R327.4.6.5 Conditions of acceptance. ASTM E2957 tests shall be conducted in triplicate, and the conditions of acceptance below shall be met. If any one of the three replicates does not meet the conditions of acceptance, three additional tests shall be conducted. All additional tests shall meet the following conditions of acceptance:

1. Absence of flame penetration of the eaves or horizontal projection assembly at any time during the test.
2. Absence of structural failure of the eaves or horizontal projection subassembly at any time during the test.
3. Absence of sustained combustion of any kind at the conclusion of the 40 minute test.

R327.4.7 Walking surfaces. Deck, porch and balcony walking surfaces located greater than 30 inches and less than 12 feet above grade or the surface below shall be constructed with one of the materials listed below.

**Exception:** Walking surfaces of decks, porches and balconies not greater than 200 square feet in area, where the surface is constructed of nominal 2-inch lumber.

1. Materials that comply with the performance requirements of Section R327.4.7.1 when tested in accordance with both ASTM E2632 and ASTM E2726.
2. Ignition resistant materials that comply with the performance requirements of Section R327.4.2 when tested in accordance with ASTM E84 or UL 723.
3. Exterior fire retardant treated wood.
4. Noncombustible material.
5. Any material that complies with the performance requirements of Section R327.4.7.2 where tested in accordance with ASTM E2632, where the exterior wall covering of the structure is noncombustible or ignition-resistant material.
6. Any material that complies with the performance requirements of ASTM E2632, where the exterior wall covering of the structure is noncombustible or ignition-resistant material.

**Exception:** Wall covering material may be of any material that otherwise complies with this chapter when the decking surface material complies with the performance requirements ASTM E84 with a Class B flame spread rating.

R327.4.7.1 Requirements for R327.4.7, item 1. The material shall be tested in accordance with ASTM E2632 and ASTM E2726, and shall comply with the conditions of acceptance below. The material shall also comply with the performance requirements of Section R327.4.2 for ignition resistant material when tested in accordance with ASTM E84 or UL 723.

R327.4.7.1.1 Conditions of acceptance. ASTM E2632 tests shall be conducted in triplicate and the conditions of acceptance below shall be met. If any one of the three replicates does not meet the conditions of acceptance, three additional tests shall be conducted. All additional tests shall meet the following conditions of acceptance:

1. Peak heat release rate of less than or equal to 25 kW/ft² (269 kW/m²)
2. Absence of sustained flaming or glowing combustion of any kind at the conclusion of the 40-minute observation period.
3. Absence of falling particles that are still burning when reaching the burner or floor.

R327.4.7.1.2 Conditions of acceptance. ASTM E2762 tests shall be conducted in triplicate and the conditions of acceptance below shall be met. If any one of the three replicates does not meet the conditions of acceptance, three additional tests shall be conducted. All of the additional tests shall meet the following conditions of acceptance:

1. Absence of sustained flaming or glowing combustion of any kind at the conclusion of the 40-minute observation period.
2. Absence of falling particles that are still burning when reaching the burner or floor.

R327.4.7.2 Requirements for R327.4.7, item 6. The material shall be tested in accordance with ASTM E2632 and shall comply with the following condition of acceptance. The test shall be conducted in triplicate and the peak heat release rate shall be less than or equal to 25 kW/ft² (269 kW/m²). If any one of the three replicates does not meet the conditions of acceptance, three additional tests shall be conducted. All of the additional tests shall meet the conditions of acceptance:

1. Absence of sustained flaming or glowing combustion of any kind at the conclusion of the 40-minute observation period.
2. Absence of falling particles that are still burning when reaching the burner or floor.

R327.4.8 Glazing. Exterior windows, windows within exterior doors, and skylights shall be tempered glass, multilayered glazed panels, glass block, or have a fire resistance rating of not less than 20 minutes.
Department of Forestry

Chapter 629

Division 44
WILDFIRE HAZARD ZONES; WILDLAND-URBAN INTERFACE

629-044-0200
Wildfire Hazard Zones — Definitions

As used in OAR 629, division 044, unless otherwise required by context:

(1) "Geographic Area" means the areas which result from the partitioning of all or portions of a jurisdiction into smaller segments, based on the presence of differing hazard values.

(2) "Hazard" means the potential to burn.

(3) "Hazard Factor" means the factors which most influence the potential of a geographic area to burn. Hazard factors are fire weather, topography, natural vegetative fuels, and natural vegetative fuel distribution.

(4) "Hazard Rating" means a cumulative value resulting from the summation of hazard values for all four hazard factors. It reflects the overall potential for a given geographic area to burn.

(5) "Hazard Value" means a value assigned to a hazard factor within a geographic area.

(6) "Jurisdiction" means a unit of local government authorized by law to adopt a building code or a fire prevention code.

(7) "Land Features" means roads, jurisdictional boundaries and other features created by human activity.

(8) "Natural Geographic Features" means streams, ridge lines and other features naturally occurring.

(9) "Wildfire Hazard Zone" means a geographic area having a combination of hazard factors that result in a significant hazard of catastrophic fire over relatively long periods of each year.

Statutory/Other Authority: ORS 526.016
Statutes/Other Implemented: ORS 93.270
History:
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0210
Purpose

The purpose of OAR 629, division 044 is to set forth the criteria by which Wildfire Hazard Zones shall be determined by jurisdictions. Such a determination is necessary before the provisions of ORS 93.270(4), portions of the Oregon One and Two Family Dwelling Specialty Code, and portions of the Oregon Structural Specialty Code can become effective. The determination of Wildfire Hazard Zones by jurisdictions is voluntary.

Statutory/Other Authority: ORS 526.016
Statutes/Other Implemented: ORS 93.270
History:
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0220
Wildfire Hazard Zones

(1) For the convenience of administration, when practical, a jurisdiction may utilize nearby natural geographic features or land features to delineate the boundaries of Wildfire Hazard Zones.
(2) It is not the intent of OAR 629, division 044 that Wildfire Hazard Zones be determined on a tax lot or an ownership specific basis, but rather that a landscape approach be used.

(3) To determine the existence of Wildfire Hazard Zones, a jurisdiction shall:

(a) Determine, for each hazard factor, the appropriate geographic areas and associated hazard values; then

(b) Overlay the geographic areas and associated hazard values determined in subsection (3)(a) above, then determine the resulting composite geographic areas and the associated hazard rating for each composite area.

(c) For each composite geographic area determined in subsection (3)(b) above, determine whether a Wildfire Hazard Zone is present from Table 5.

TABLE 5

WILDFIRE HAZARD ZONE
Hazard Rating — Wildfire Hazard Zone.
1, 2, 3, 4, 5, or 6 — NO.
7, 8, 9, 10, 11 or 12 — YES.

Statutory/Other Authority: ORS 526.016
Statutes/Other Implemented: ORS 93.270
History:
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0230
Fire Weather Hazard Factor

(1) The reference for establishing the fire weather hazard factor shall be data provided by the Oregon Department of Forestry, which was developed following an analysis of daily fire danger rating indices in each regulated use area of the state.

(2) For geographic areas described in Table 1, select the appropriate hazard value from Table 1.

TABLE 1

FIRE WEATHER HAZARD FACTOR
County — Hazard Value.
Baker — 3.
Benton — 2.
Clackamas — 2.
Clatsop, Area 1 — All of Clatsop County except Area 2. — 1.
Clatsop, Area 2 — That portion of Clatsop County in Township 4 North Range 6 West. — 2.
Columbia — 2.
Coos, Area 1 — All of Coos County except Area 2. — 1.
Coos, Area 2 — That portion of Coos County east of a generally north-south straight line which extends from the boundary with Douglas County, passes through the locales of Allegany and Gaylord, to the boundary with Curry County. — 2.
Crook — 3.
Curry, Area 1 — All of Curry County except Area 2. — 1.
Curry, Area 2 — That portion of Curry County east of the north-south line between Townships 13 West and 14 West. — 2.
Deschutes — 3.
Douglas, Area 1 — That portion of Douglas County west of a generally north-south straight line which extends from the boundary with Lane County, passes through the locale of Sulpher Springs, to the boundary with Coos County. — 1.
Douglas, Area 2 — That portion of Douglas County east of Area 1 and west of the north-south line between Townships 8 West and 9 West. — 2.

Douglas, Area 3 — That portion of Douglas County east of Area 1 and north of a generally east-west straight line which extends from the city of Cottage Grove to the mouth of Winchester Bay. — 2.

Douglas, Area 4 — That portion of Douglas County east of Area 2, south of Area 3 and west of Area 5. — 3.

Douglas, Area 5 — That portion of Douglas County east of a generally north-south line which follows the western boundary of the Umpqua National Forest from the boundary with Jackson County to the boundary with Lane County. — 2.

Gilliam — 3.

Grant — 3.

Harney — 3.

Hood River — 3.

Jackson — 3.

Jefferson — 3.

Josephine, Area 1 — All of Josephine County except Area 2. — 2.

Josephine, Area 2 — That portion of Josephine County east of a generally north-south line which follows Highway 199 from the California border to the locale of Wonder and then extends straight through the locale of Galice to the boundary with Douglas County. — 3.

Klamath — 3.

Lake — 3.

Lane, Area 1 — All of Lane County except Area 2. — 1.

Lane, Area 2 — That portion of Lane County east of generally north-south straight line which extends from the boundary with Benton County through the northeast corner of Township 15 South Range 9 West and the southwest corner of Township 18 South Range 9 West to the boundary with Douglas County. — 2.

Lincoln, Area 1 — All of Lincoln County except Area 2. — 1.

Lincoln, Area 2 — That portion of Lincoln County east of a generally north-south straight line which extends from the boundary with Lane County through the southwest corner of Township 14 South Range 10 West to the northwest corner of Township 12 South Range 10 West then straight to the northeast corner of Township 14 South Range 10 West then straight through the locale of Rose Lodge to the boundary with Tillamook County. — 2.

Linn — 2.

Malheur — 3.

Marion — 2.

Morrow — 3.

Multnomah — 2.

Polk — 2.

Sherman — 3.

Tillamook, Area 1 — All of Tillamook County except Area 2. — 1.

Tillamook, Area 2 — That portion of Tillamook County east of the north-south line between Townships 7 West and 8 West. — 2.

Umatilla — 3.

Union — 3.

Wallowa — 3.

Wasco — 3.

Washington — 2.
Wheeler — 3.
Yamhill — 2.

Statutory/Other Authority: ORS 526.016
Statutes/Other Implemented: ORS 93.270
History:
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0240
Topography Hazard Factor

(1) The reference for establishing the topography hazard factor shall be:

(a) The General Soil Map Report published by the Oregon Water Resources Board and the Soil Conservation Service, USDA in 1969; or

(b) The appropriate 7.5 minute quadrangle map published by the U.S. Geological Survey, USDI.

(2) For geographic areas determined by use of a reference set forth in subsection (1) above, select the appropriate hazard value from Table 2.

TABLE 2

TOPOGRAPHY HAZARD FACTOR

Map Slope Class — Hazard Value
1 (Slopes 00–03%) — 0.
2 (Slopes 03–07%) — 1.
3 (Slopes 07–12%) — 1.
4 (Slopes 12–20%) — 2.
5 (Slopes 20–35%) — 3.
6 (Slopes 35–60+%) — 3.

Statutory/Other Authority: ORS 526.016
Statutes/Other Implemented: ORS 93.270
History:
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0250
Natural Vegetative Fuel Hazard Factor


(2) Using the natural vegetative fuel models described in the reference set forth in subsection (1), and summarized in Table 3, divide the jurisdiction into geographic areas which best describe the natural vegetation expected to occupy sites for the next 10 to 15 years and then select the appropriate hazard value from Table 3.

TABLE 3

NATURAL VEGETATIVE FUEL HAZARD FACTOR

Natural Vegetative Fuel Description — Hazard Value
Little or no natural vegetative fuels are present. — 0.
Grass. Very little shrub or timber is present, generally less than one-third of the area. Main fuel is generally less than two feet in height. Fires are surface fires that move rapidly through cured grass and associated material. (Fuel model 1) — 3
Grass. Open shrub lands and pine stands or scrub oak stands that cover one-third to two-thirds of the area. Main fuel is generally less that two feet in height. Fires are surface fires that spread primarily through the fine herbaceous fuels, either curing or dead. (Fuel model 2) — 3.
Grass. Beach grasses, prairie grasses, marshland grasses and wild or cultivated grains that have not been harvested. Main fuel is generally less than four feet in height, but considerable variation may occur. Fires are the most intense of the grass group and display high rates of spread under the influence of wind. (Fuel model 3) — 3.

Shrubs. Stands of mature shrubs have foliage known for its flammability, such as gorse, manzanita and snowberry. Main fuel is generally six feet or more tall. Fires burn with high intensity and spread very rapidly. (Fuel model 4) — 3.

Shrubs. Young shrubs with little dead material and having foliage not known for its flammability, such as laurel, vine maple and alders. Main fuel is generally three feet tall or less. Fires are generally carried in the surface fuels and are generally not very intense. (Fuel model 5) — 1.

Shrubs. Older shrubs with foliage having a flammability less than fuel model 4, but more than fuel model 5. Widely spaced juniper and sagebrush are represented by this group. Main fuel is generally less than six feet in height. Fires will drop to the ground at low wind speeds and in stand openings. (Fuel model 6) — 2.

Timber. Areas of timber with little undergrowth and small amounts of litter buildup. Healthy stands of lodgepole pine, spruce, fir and larch are represented by this group. Fires will burn only under severe weather conditions involving high temperatures, low humidities and high winds. (Fuel model 8) — 1.

Timber. Areas of timber with more surface litter than fuel model 8. Closed stands of healthy ponderosa pine and white oak are in this fuel model. Spread of fires will be aided by rolling or blowing leaves. (Fuel model 9) — 2.

Timber. Areas of timber with heavy buildups of ground litter caused by overmaturity or natural events of wind throw or insect infestations. Fires are difficult to control due to large extent of ground fuel. (Fuel model 10) — 3.

**Statutory/Other Authority: ORS 526.016**
**Statutes/Other Implemented: ORS 93.270**
**History:**
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

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**629-044-0260**
Natural Vegetative Fuel Distribution Hazard Factor

(1) Divide the jurisdiction into geographic areas which best describe the percentage of the area which is occupied by the foliage of natural vegetative fuels.

(2) For each geographic area determined in section (1) above, select the appropriate hazard value from Table 4.

**TABLE 4**

<table>
<thead>
<tr>
<th>Natural Vegetative Fuel Distribution — Hazard Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 10% of the area — 0.</td>
</tr>
<tr>
<td>10 to 25% of the area — 1.</td>
</tr>
<tr>
<td>25 to 40% of the area — 2.</td>
</tr>
<tr>
<td>40 to 100% of the area — 3.</td>
</tr>
</tbody>
</table>

**Statutory/Other Authority: ORS 526.016**
**Statutes/Other Implemented: ORS 93.270**
**History:**
FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

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**629-044-1000**
Wildland-Urban Interface — Purpose

(1) The purpose of OAR 629-044-1000 to 629-044-1110 is to implement the provisions of ORS 477.015 to 477.061, the Oregon Forestland-Urban Interface Fire Protection Act of 1997.

(2) The purpose of OAR 629-044-1010 to 629-044-1045 is to set forth the criteria by which the forestland-urban interface shall be identified and classified pursuant to ORS 477.025 to 477.057.

(3) The purpose of OAR 629-044-1050 to 629-044-1090 is to set forth the standards an owner of land in the forestland-urban interface shall apply pursuant to ORS 477.059(2).

(4) The purpose of OAR 629-044-1095 to 629-044-1105 is to set forth the process for written evaluation and certification pursuant to ORS 477.059(3).
(5) The purpose of OAR 629-044-1110 is to set forth the processes which shall apply to special or additional costs of fire protection within the forestland-urban interface pursuant to ORS 477.060.

Statutory/Other Authority: ORS 477.027, 477.059 & 477.060
Statutes/Other Implemented: ORS 477.015 - 477.061
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1005 Definitions

(1) The definitions set forth in ORS 477.001, 477.015 and OAR 629-041-0005 shall apply to 629-044-1000 to 629-044-1110, unless the context otherwise requires.

(2) The following words and phrases, when used in OAR 629-044-1000 to 629-044-1110, shall mean the following, unless the context otherwise requires:

(a) “Community Wildfire Protection Plan” means a plan developed pursuant to the federal Healthy Forests Restoration Act of 2003 and which has been approved, within the past five years, by the appropriate city or county, by the appropriate structural fire service provider and by the Oregon Department of Forestry.

(b) “Concentration of structures” means dwellings in a density of four or more per quarter of a quarter section (an area approximately 40 acres in size), as determined by the Public Land Survey.

(c) “Classification” means the process set forth in ORS 477.031 to 477.052 and 477.057.

(d) “Classified by a committee” means the end result of the classification process set forth in ORS 477.031 to 477.052 and 477.057.

(e) “Current zoning” means zoning which allows the siting of a dwelling as an outright use.

(f) “Driveway” means the primary, privately owned vehicle access road that serves a dwelling, which is controlled by the owner of the dwelling, and which is longer than 150 feet.

(g) “ Dwelling” means a structure, or a part of a structure, that is used as a home, as a residence, or as a sleeping place by one or more people who maintain a household in the structure.

(h) “Fire resistant roofing” means roofing material that has been installed and is maintained to the specifications of the manufacturer and which:

(A) Is rated by Underwriter’s Laboratory as Class A, Class B, Class C, or is equivalent thereto; or
(B) Is metal.

(i) “Fuel break” means a natural or a human-made area immediately adjacent to a structure or to a driveway, where material capable of allowing a wildfire to spread does not exist or has been cleared, modified, or treated to:

(A) Significantly reduce the rate of spread and the intensity of an advancing wildfire; and

(B) Create an area in which fire suppression operations may more safely occur.

(j) “Geographic area” means an area which results from the partitioning of all or portions of a district into smaller segments, based on the presence of differing hazard factors, risks, or dwelling concentrations.

(k) “Hazard factor” means one of the three factors which most influence the potential of a wildfire to spread. The three hazard factors are topography, natural vegetative fuels, and wildfire weather.

(l) “Homeowner’s association” means a non-profit corporation organized under ORS chapter 65 and which is subject to the provisions of ORS 94.625 to 94.700.

(m) “Included rural lands” means lands which meet the definition of “rural” but which have been classified by a committee as “suburban.”

(n) “Ladder fuel” means branches, leaves, needles, and other combustible vegetation that may allow a wildfire to spread from lower growing vegetation to higher growing vegetation.

(o) “Lands” means one or more tax lots.

(p) “Non-fire resistant roofing” means roofing material that is not fire resistant including, but not limited to, cedar shakes.

(q) “Private fire department” means a private entity which provides structural fire prevention and suppression services and which meets the safety requirements set forth in OAR 437-002-0182.
(r) "Road" means a road over which the public has a right of use that is a matter of public record.

(s) "Rural" means a geographic area which has not been classified by a committee as suburban or urban and shall include: 

(A) Lands zoned primarily for farm or forestry uses; 

(B) Lands which have an average tax lot size of 10 acres or larger; 

(C) Lands not zoned to allow a concentration of structures; and 

(D) Lands which do not contain a concentration of structures.

(t) "Safety zone" means an adequately sized area, which is substantially free of flammable materials, and which can be used as a refuge to protect human life from an advancing wildfire.

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

(v) "Structural fire service provider" means a local government agency or a private fire department which provides structural fire prevention and suppression services.

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

(x) "Suburban" means a geographic area which includes one or more of the following:

(A) Lands where a concentration of structures exists; 

(B) Lands on which current zoning allows a concentration of structures; or 

(C) Included rural lands.

(y) "Urban" means a geographic area that includes one or more of the following:

(A) Lands within a city limit; or 

(B) Lands within an urban growth boundary.

(z) "Urban growth boundary" is defined by ORS 197.295.

(aa) "Wildfire" means an uncontrolled fire which is burning on forestland and which is damaging, or is threatening to damage, forest resources or structures.

(ab) "Zoning" means a local governmental zoning ordinance, a land division ordinance adopted under ORS 92.044 or 92.046, or a similar general ordinance establishing standards for implementing a comprehensive plan.

Statutory/Other Authority: ORS 477.027, 477.059 & 477.060
Statutes/Other Implemented: ORS 477.015 - 477.061
History: 
DOF 3-2007, f. 8-23-07, cert. ef. 12-31-07 
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1010
Forestland-Urban Interface Lands Identified By A Committee

(1) A committee shall identify for classification only those lands which:

(a) Are within the county of its jurisdiction; 

(b) Are within a forest protection district; 

(c) Meet the definition of forestland; and 

(d) Meet the definition of suburban or urban.

(2) The amount of included rural lands identified for classification as suburban shall be kept to a minimum.

(3) Lands which meet all the criteria set forth in subsections (1) and (2) of this rule shall be considered to be forestland-urban interface lands.

(4) A committee shall set forth the boundaries of forestland-urban interface lands identified in subsection (3) of this rule. For clarity, natural geographic features, human-made land features, public land survey lines, and political boundary lines should be used to describe such boundaries.
629-044-1015
Forestland-Urban Interface Lands Classified By A Committee

(1) Forestland-urban interface lands shall be classified by a committee as follows:

(a) Locate, for each hazard factor, the appropriate geographic areas and the associated values from the criteria set forth in OAR 629-044-1035 to 629-044-1045; then

(b) Overlay the geographic areas and the associated values, located in subsection (1)(a) of this rule, and identify the resulting composite geographic areas and the associated values; then

(c) Determine the classification for each composite geographic area identified in subsection (1)(b) of this rule, from the criteria set forth in Table 1 of this rule.

(d) Geographic areas determined in subsection (1)(c) of this rule to be “Extreme” may be classified by a committee as “High Density Extreme” pursuant to OAR 629-044-1020.

(2) A committee shall set forth the boundaries of the geographic areas classified by a committee pursuant to subsection (1) of this rule. For clarity, natural geographic features, human-made land features, public land survey lines, and political boundary lines should be used to describe such boundaries.

[ED. NOTE: Tables referenced are available from the agency.]

629-044-1020
High Density Extreme Classification

(1)(a) The purpose of the High Density Extreme classification is to identify those lands where vegetation modification around structures alone may not be sufficient to help protect lives during a wildfire.

(b) Owners of lands classified High Density Extreme are required to provide fuel breaks adjacent to:

(A) Property lines;

(B) Roads; or

(C) Both property lines and roads.

(2) Lands may be classified by a committee as High Density Extreme when a geographic area meets all of the following criteria:

(a) The lands have been classified by a committee as Extreme based on the hazard factors;

(b) The lands have a current zoning for residential development;

(c) The lands contain fuels which, if not modified or treated, will result in a wildfire having a significant rate of spread and intensity;

(d) The lands have:

(A) An average tax lot size of less than three acres; or

(B) A typical tax lot configuration which prevents the establishment of a 30 feet wide fuel break adjacent to structures;

(e) The lands lack:

(A) Safety zones; or (B) Effective vehicle egress which may hamper the safe evacuation of dwellings during a wildfire.

(3) Notwithstanding subsection (2) of this rule, lands may be classified by a committee as High Density Extreme when all of the following apply to a geographic area which has current zoning for residential development:

(a) The committee receives a written request for such classification from one or more of the following entities in which the lands are located:
(A) The county;
(B) The city;
(C) The structural fire service provider;
(D) The entity responsible for development of a Community Wildfire Protection Plan; or
(E) The homeowner’s association.

(b) The written request contains:

(A) Certification that the request has been approved by the governing body of the entity;
(B) Justification for the requested classification, based upon:

(i) The existence of fuels which, if not modified or treated, will result in a wildfire having a significant rate of spread and intensity; or

(ii) A lack of effective vehicle egress which may hamper the safe evacuation of dwellings during a wildfire.

(4) When lands are classified by a committee as High Density Extreme, the committee shall also specify which of the following options shall apply to the lands:

(a) Option 1, where fuel breaks shall be provided adjacent to property lines pursuant to OAR 629-044-1075(1);
(b) Option 2, where fuel breaks shall be provided adjacent to roads pursuant to ORS 629-044-1075(2); or
(c) Option 3, where fuel breaks shall be provided adjacent to property lines and to roads pursuant to OAR 629-044-1075(1) and (2).

(5) Written requests received by a committee under subsection (3) of this rule automatically terminate after a period of five years.

Statutory/Other Authority: ORS 477.027
Statutes/Other Implemented: ORS 477.025 - 477.057
History:
DOF 3-2007, f. 8-23-07, cert. ef. 12-31-07
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1025
Periodic Forestland-Urban Interface Lands Identification And Classification

The identification and classification of forestland-urban interface lands shall be reviewed by a committee at least once every five years.

Statutory/Other Authority: ORS 477.027
Statutes/Other Implemented: ORS 477.025 - 477.057
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1030
Forestland-Urban Interface Lands Identification And Classification By The State Forester

When the State Forester performs the duties of a committee pursuant to ORS 477.057, the State Forester shall comply with OAR 629-044-1010 to 629-044-1045.

Statutory/Other Authority: ORS 477.027
Statutes/Other Implemented: ORS 477.025 - 477.057
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1035
Wildfire Weather Hazard Factor

(1) The reference for establishing the wildfire weather hazard factor shall be data provided by the Oregon Department of Forestry, which was developed following an analysis of daily wildfire danger rating indices in each regulated use area of the state and which is described in Table 1 of OAR 629-044-0230.

(2) For the geographic areas described in Table 1 of OAR 629-044-0230, select the appropriate hazard values.
(3) A committee may increase the hazard value determined in subsection (2) of this rule by one point in any geographic area which it determines to have a history of frequent wildfire occurrence.

[ED. NOTE: Tables referenced are available from the agency.]

Statutory/Other Authority: ORS 477.027
Statutes/Other Implemented: ORS 477.025 - 477.057
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1040
Topography Hazard Factor

(1) The reference for establishing the topography hazard factor shall be:

(a) A 30-meter or better Digital Elevation Model (DEM); or

(b) The appropriate 7.5 minute quadrangle map published by the U.S. Geological Survey, USDI.

(2) Using the reference set forth in subsection (1) of this rule, determine the geographic areas which best describe:

(a) Areas having an overall slope of 25% (14 degrees) or less; and

(b) Areas having an overall slope of more than 25% (14 degrees).

(3) Each geographic area determined in subsection (2) of this rule shall be assigned an appropriate hazard value, as follows:

(a) A hazard value of 1, for geographic areas described by subsection (2)(a) of this rule; or

(b) A hazard value of 2, for geographic areas described by subsection (2)(b) of this rule.

Statutory/Other Authority: ORS 477.027
Statutes/Other Implemented: ORS 477.025 - 477.057
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1045
Natural Vegetative Fuel Hazard Factor

(1) The reference for establishing the natural vegetative fuel hazard factor shall be the document “Aids to Determining Fuel Models for Estimating Fire Behavior” published by the Forest Service, USDA Intermountain Forest and Range Experiment Station in 1982 as General Technical Report Technical INT-122. Information from this reference is summarized in Table 3 of OAR 629-044-0250. [Table not included. See ED. NOTE.]

(2) Using the fuel models described in the reference set forth in subsection (1) of this rule, determine the geographic areas which best describe the natural vegetative fuels expected to occupy an area for the next five years.

(3) The geographic areas determined in subsection (2) of this rule shall be assigned the appropriate hazard value, as shown in Table 3 of OAR 629-044-0250. [Table not included. See ED. NOTE.]

(4) It is recognized that natural vegetation is highly variable and that the fuel models used in subsection (2) of this rule may not always accurately reflect expected wildfire behavior, due to variations in local species and vegetation conditions. Therefore, a committee may make such modifications to the hazard values as it determines is necessary to accurately reflect the following:

(a) A hazard value of 1 shall describe vegetation that typically produces a flame length of up to 5 feet, a wildfire which exhibits very little spotting, torching, or crowning, and which results in a burned area that can normally be entered within 15 minutes.

(b) A hazard value of 2 shall describe vegetation that typically produces a flame length of 5 to 8 feet, a wildfire which exhibits sporadic spotting, torching, or crowning, and which results in a burned area that can normally be entered within one hour.

(c) A hazard value of 3 shall describe vegetation that typically produces a flame length of over 8 feet, a wildfire that exhibits frequent spotting, torching, or crowning, and which results in a burned area that normally cannot be entered for over one hour.

[ED. NOTE: Tables referenced are available from the agency.]
629-044-1050
Purpose And Intent Of Standards

(1) The standards required by OAR 629-044-1055 are designed to minimize or mitigate a wildfire hazard or risk on an
owners property which arises due, singly or in combination, to the presence of structures, to the arrangement or
accumulation of vegetative fuels, or to the presence of other wildfire hazards.

(2) It is recognized that owners have a variety of objectives to achieve while applying the standards, including objectives
related to aesthetics, dust barriers, fish and wildlife habitat, gardening, soil stabilization, sound barriers, and visual
barriers. It is the intent of the standards to allow owners to meet such objectives, provided there is no compromise of
the standards needed to mitigate wildfire hazards or risks.

(3) The standards are considered to be minimum measures which are intended to improve the survivability of structures
during a wildfire, but which will not guarantee survivability.

629-044-1055
Standards

(1) Owners of lands classified by a committee as Low are not required to comply with the standards, however, they are
encouraged to review their individual situation and to apply those standards which may be appropriate.

(2) Owners of lands classified by a committee as Moderate, High, Extreme, or High Density Extreme shall comply with
the standards applicable to their lands. In meeting this requirement, owners shall apply one or more of the following:

(a) The default standards set forth in OAR 629-044-1060, which are intended for the majority of owners;

(b) The optional standards set forth in OAR 629-044-1065, which are intended for owners who are unable to meet the
default standards; or

(c) The alternate standards developed pursuant to OAR 629-044-1070, which are intended for owners who wish to
address site specific conditions or unique situations.

(3) Owners are encouraged to exceed the standards and to apply additional wildfire safety measures.

629-044-1060
Default Standards

(1) Where structures exist on lands classified by a committee as Moderate, High, Extreme, or High Density Extreme
owners shall:

(a) Provide and maintain primary fuel breaks which comply with the requirements of OAR 629-044-1085 and which are:

(A) Immediately adjacent to structures, for a distance of at least 30 feet, or to the property line, whichever is the
shortest distance. The distance shall be measured along the slope and from the furthest extension of the structure,
including attached carports, decks, or eaves.

(B) Immediately adjacent to driveways, for a distance of at least ten feet from the centerline of a driveway, or to the
property line, whichever is the shortest distance. The distance shall be measured along the slope. Including the driving
surface, a fuel break shall result in an open area which is not less than 13 1/2 feet in height and 12 feet in width or to the
property line, whichever is the shortest distance.

(b) Provide and maintain secondary fuel breaks which comply with the requirements of OAR 629-044-1085 and which
are immediately adjacent to primary fuel breaks, for the distance necessary to comply with the total fuel break distance
specified in Table 2 of this rule, or to the property line, whichever is the shortest distance. The distance shall be measured along the slope and from the furthest extension of the structure, including attached carports, decks, or eaves.

(c) Remove any portion of a tree which extends to within 10 feet of the outlet of a structure chimney or a stove pipe;

(d) Maintain the portion of any tree which overhangs a structure substantially free of dead plant material;

(e) Maintain the area under decks substantially free of firewood, stored flammable building material, leaves, needles, and other flammable material; and

(f) During times of the year when wildfire may be a threat, locate firewood, flammable building material, and other similar flammable material:

(A) At least 20 feet away from a structure; or

(B) In a fully enclosed space.

(2) On all lands classified by a committee as High Density Extreme, owners shall comply with subsection (1) of this rule and with the standards set forth in OAR 629-044-1075.

[ED. NOTE: Tables referenced are available from the agency.]

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1065
Optional Standards

(1) Where structures exist on lands classified by a committee as Moderate, High, Extreme, or High Density Extreme, owners shall provide fuel breaks which comply with the requirements of OAR 629-044-1085 and which are immediately adjacent to structures for a distance of thirty feet or to the property line, whichever is the shortest distance. The distance shall be measured along the slope and from the furthest extension of the structure, including attached carports, decks, or eaves.

(2) Where structures exist on lands classified by a committee as Moderate, owners shall comply with subsection (1) of this rule and with one or more of the options set forth in subsection (6) of this rule.

(3) Where structures exist on lands classified by a committee as High, owners shall comply with subsection (1) of this rule and with two or more of the options set forth in subsection (6) of this rule.

(4) Where structures exist on lands classified by a committee as Extreme, owners shall comply with subsection (1) of this rule and with three or more of the options set forth in subsection (6) of this rule.

(5) Where structures exist on lands classified by a committee as High Density Extreme, owners shall comply with subsection (1) of this rule, with three or more of the options set forth in subsection (6) of this rule, and with subsection (7) of this rule.

(6) Optional standards are:

(a) Option 1, fire resistant structures. This option is intended to reduce the likelihood of a structure being ignited by a wildfire. To comply with this option, owners of structures shall:

(A) Have fire resistant roofing material;

(B) Have all permanent openings into and under the structure completely covered with noncombustible, corrosion-resistant, mesh screening material, which has openings no greater than 1/4 inch in size;

(C) Where there are attachments to the structure, such as decks and porches:

(i) Maintain the area under the attachments substantially free of firewood, flammable building material, leaves, needles, and other flammable material; or

(ii) Cover openings to the area under the attachments with noncombustible, corrosion-resistant mesh screening material, which has openings no greater than 1/4 inch in size;

(D) Remove any portion of a tree which extends to within 10 feet of the outlet of a structure chimney or a stove pipe;

(E) Maintain the portion of any tree which overhangs a structure substantially free of dead plant material; and

(F) During times of the year when wildfire may be a threat, locate firewood, flammable building material, and other similar flammable material:
(i) At least 20 feet away from the structure; or

(ii) In a fully enclosed space.

(b) Option 2, secondary fuel break. This option is intended to provide additional separation between structures and natural vegetation. To comply with this option, owners of structures shall provide and maintain secondary fuel breaks which comply with the requirements of OAR 629-044-1085 and which are immediately adjacent to primary fuel breaks, for the distance necessary to create a total fuel break of 100 feet, or to the property line, whichever is the shortest distance. The distance shall be measured along the slope and from the furthest extension of the structure, including attached carports, decks, or eaves.

(c) Option 3, wildfire safe access. This option is intended to provide a more safe vehicle access to and from structures during a wildfire. To comply with this option, owners of a driveway shall provide and maintain a primary fuel break which complies with the requirements of OAR 629-044-1085 and which is immediately adjacent to a driveway for a distance of ten feet from the centerline of the driveway, or to the property line, whichever is the shortest distance. The distance shall be measured along the slope. Including the driving surface, a fuel break shall result in an open area which is not less than 13 1/2 feet in height and 12 feet in width or to the property line, whichever is the shortest distance.

(d) Option 4, low ignition risk property. This option is intended to reduce the likelihood of a wildfire ignition. To comply with this option, owners shall at all times use the following fire prevention practices:

(A) Open fires shall be:

(i) Built, ignited and maintained in compliance with all applicable permit and fire safety requirements;

(ii) Tended and maintained under the control of a person 16 years of age or older;

(iii) Conducted only when weather conditions permit safe burning;

(iv) Conducted in a location which has had all surrounding material cleared of flammable material sufficient to prevent unintended spread of the fire; and

(v) Conducted only when adequate and appropriate fire tools and/or a water supply are present to assist in preventing unintended spread of the fire.

(B) Grills, incinerators, outdoor fireplaces, permanent barbecues, and similar outdoor devices shall be maintained in good repair, in safe condition, and all openings shall normally be completely covered by a spark arrester, by a screen, or by a device which prevents unintended spread of a fire.

(C) Ashes and coals resulting from the use of grills, incinerators, outdoor fireplaces, permanent barbecues, and similar outdoor devices shall be disposed of in a manner which prevents unintended spread of a fire.

(D) The use of outdoor equipment or devices capable of generating heat, open flame, or sparks shall be conducted in compliance with all applicable permit and fire safety requirements; and

(E) Chimneys and stove pipes shall be used only if their openings are completely covered with a spark arrester which meets or exceeds the following standard: constructed of 12 USA standard gauge wire which has openings no larger than 1/2 inch in size.

(7) On all lands classified by a committee as High Density Extreme, owners comply with the standards set forth in OAR 629-044-1075.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1070
Alternate Standards

(1) Where structures exist on lands classified by a committee as Moderate, High, Extreme, or High Density Extreme, owners shall comply with all standards described in a cooperative agreement made pursuant to ORS 477.406.

(2) Cooperative agreements which describe alternate standards shall be valid only if:

(a) On forms provided by the State Forester or in a format prescribed by the State Forester;

(b) Signed by the District Forester and by the owner; and

(c) The alternate standards provide, in the judgement of the District Forester, for equal or better protection from wildfire than do the standards of OAR 629-044-1060, 629-044-1065, and 629-044-1075 which apply to the classification of the lands for which the cooperative agreement is made.
629-044-1075
Additional Standards For Lands Classified As High Density Extreme

(1) On all lands classified by a committee as High Density Extreme with Option 1, owners shall provide fuel breaks which comply with the requirements of OAR 629-044-1085 and which are immediately adjacent to all property lines, for a distance of twenty feet or to the adjacent property line, whichever is the shortest distance. The distance shall be measured along the slope.

(2) On all lands classified by a committee as High Density Extreme with Option 2, owners shall provide fuel breaks which comply with the requirements of OAR 629-044-1085 and which are immediately adjacent to all road centerlines, for a distance of at least thirty feet, or to the property line, whichever is the shortest distance. The distance shall be measured along the slope and from the center of the driving surface.

(3) On all lands classified by a committee as High Density Extreme with Option 3, owners shall comply with subsections (1) and (2) of this rule.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 3-2007, f. 8-23-07. cert. ef. 12-31-07
DOF 9-2002, f. 9-19-02. cert. ef.11-15-02

629-044-1080
Modification Of Standards

The District Forester may, in writing, reduce or waive any standard of OAR 629-044-1060, 629-044-1065, 629-044-1075, and 629-044-1085 if the forester finds that conditions so warrant. Reductions or waivers made under this rule:

(1) May be made only after a written request from the owner;

(2) Are intended to be few in number;

(3) Must address:

(a) A site specific condition or a unique situation which does not warrant the development of alternate standards under OAR 629-044-1070; or

(b) A conflict with the requirements of other codes, laws, ordinances, or regulations, as described in ORS 477.023(2), and which does not warrant the development of alternate standards under OAR 629-044-1070; and

(4) Shall be:

(a) On forms provided by the State Forester or in a format prescribed by the State Forester;

(b) Signed by the District Forester and by the owner.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 9-2002, f. 9-19-02. cert. ef.11-15-02

629-044-1085
Fuel Break Requirements

(1) The purpose of a fuel break is to:

(a) Slow the rate of spread and the intensity of an advancing wildfire; and

(b) Create an area in which fire suppression operations may more safely occur.

(2) A fuel break shall be a natural or a human-made area where material capable of allowing a wildfire to spread:

(a) Does not exist; or
(b) Has been cleared, modified, or treated in such a way that the rate of spread and the intensity of an advancing wildfire will be significantly reduced.

(3) A primary fuel break shall be comprised of one or more of the following:

(a) An area of substantially non-flammable ground cover. Examples include asphalt, bare soil, clover, concrete, green grass, ivy, mulches, rock, succulent ground cover, or wildflowers.

(b) An area of dry grass which is maintained to an average height of less than four inches.

(c) An area of cut grass, leaves, needles, twigs, and other similar flammable materials, provided such materials do not create a continuous fuel bed and are in compliance with the intent of subsections (1) and (2) of this rule.

(d) An area of single specimens or isolated groupings of ornamental shrubbery, native trees, or other plants, provided they are:

(A) Maintained in a green condition;

(B) Maintained substantially free of dead plant material;

(C) Maintained free of ladder fuel;

(D) Arranged and maintained in such a way that minimizes the possibility a wildfire can spread to adjacent vegetation; and

(E) In compliance with the intent of subsections (1) and (2) of this rule.

(4) A secondary fuel break shall be comprised of single specimens or isolated groupings of ornamental shrubbery, native trees, or other plants, provided they are:

(a) Maintained in a green condition;

(b) Maintained substantially free of dead plant material;

(c) Maintained free of ladder fuel;

(d) Arranged and maintained in such a way that minimizes the possibility a wildfire can spread to adjacent vegetation; and

(e) In compliance with the intent of subsections (1) and (2) of this rule.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1090
Apparent Conflicts With Standards

Pursuant to ORS 477.023:

(1) The standards set forth in OAR 629-044-1060 to 629-044-1085 do not supercede or replace any federal law or regulation, any other state agency law or regulation, or any more restrictive local government ordinance or code.

(2) Apparent conflicts with other laws and regulations, for which the forester is responsible and has jurisdiction, shall be resolved within the scope of the forester’s authority and documented, as provided in OAR 629-044-1070 or 629-044-1080.

(3) Compliance with OAR 629-044-1070 to 629-044-1080 does not relieve the owner of the requirements of any other law or regulation which applies to the lands in question.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.023 & 477.059
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1095
Written Evaluation

(1) Pursuant to ORS 477.059, the forester shall provide to the owners of lands classified by a committee a copy of OAR 629-044-1000 to 629-044-1110 and an evaluation form:
(a) Two years before the obligations of OAR 629-044-1100 become effective on the lands for the first time;

(b) Every five years thereafter; and

(c) When requested by an owner.

(2) The intent of an evaluation form provided pursuant to subsections (1), (5) or (6) of this rule is to allow owners to self-certify compliance with the standards of OAR 629-044-1060 to 629-044-1085. Completion and return of the evaluation form to the forester is optional.

(3) In lieu of completing and returning an evaluation form provided pursuant to subsections (1), (5) or (6) of this rule, an owner may have it completed and returned by an accredited assessor.

(4) Completed and returned evaluation forms shall become void:

(a) Five years after they are provided by the forester;

(b) When the ownership of a tax lot changes;

(c) When a structure is added to a tax lot; or

(d) Pursuant to a determination made in accordance with the provisions of subsection (3) of OAR 629-044-1100.

(5) When the ownership of a tax lot changes, the previous owner shall notify the new owner of the voiding of the evaluation form under subsection (4)(b) of this rule. The new owner may, as provided in subsection (1)(c) of this rule, request that the forester provide a current copy of OAR 629-044-1000 to 629-044-1110 and a new evaluation form.

(6) When a structure is added to a tax lot, the owner may request that the forester provide a current copy of OAR 629-044-1100 and a new evaluation form.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1100
Certification

(1) An owner of lands classified by a committee shall be considered to be certified as meeting the standards set forth in OAR 629-044-1060 to 629-044-1085 if:

(a) They sign and return to the forester an evaluation form provided pursuant to OAR 629-044-1095; or

(b) They use the services of an Accredited Assessor who signs and returns to the forester an evaluation form provided pursuant to OAR 629-044-1095; and

(c) The evaluation form has not become void pursuant to OAR 629-044-1095(4).

(2) The forester may make a determination of whether the lands of an owner meet the standards set forth in OAR 629-044-1060 to 629-044-1085 at any time following the completion and return of an evaluation form provided pursuant to 629-044-1095. Such a determination must be made prior to the occurrence of a wildfire on an owners tax lot.

(3) If the forester determines that an evaluation form provided pursuant to OAR 629-044-1095 was returned by the owner and that it incorrectly or falsely indicated the lands meet the standards set forth in 629-044-1060 to 629-044-1085, the owner shall be notified in writing that both the evaluation form and the certification granted under subsection (1) of this rule will become void on a specified date. In making such a determination, the forester shall:

(a) Not base the determination on technicalities or omissions which, in the sole judgment of the forester, are minor in nature; and

(b) First provide the owner a reasonable time to:

(A) Provide evidence that the property does meet the standards set forth in OAR 629-044-1060 to 629-044-1085; or

(B) Bring their property into compliance with the standards set forth in OAR 629-044-1060 to 629-044-1085.

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02
Accredited Assessors

(1) An Accredited Assessor shall obtain accreditation from the District Forester prior to conducting any activities allowed or required by OAR 629-044-1100 in a district.

(2) To request accreditation, prospective Accredited Assessors shall make application to the District Forester and sign an accreditation agreement on forms provided by the State Forester or in a format prescribed by the State Forester.

(3) Accredited Assessors will not be considered to be accredited until the District Forester reviews and approves both their application and their signed accreditation agreement.

(4) Applications to become an Accredited Assessor shall include, but will not be limited to:

(a) For a Type 1 Accredited Assessor:

(A) The person’s Oregon Construction Contractors Board or Oregon Landscape Contractors Board license number; and

(B) Evidence that the person has had at least two years total experience related to:

(i) Wildland fire prevention or suppression; or

(ii) Management of properties which contain forestland.

(b) For a Type 2 Accredited Assessor:

(A) A statement that the person is acting as an authorized agent of a structural fire service provider;

(B) The signature of the Fire Chief of the structural fire service provider;

(C) Evidence that the person is a full time paid employee or a volunteer employee in good standing of the structural fire service provider; and

(D) Evidence that the person has had at least two years total experience related to wildland fire prevention or suppression.

(c) For a Type 3 Accredited Assessor:

(A) A statement that the person is acting as an authorized agent of a homeowner’s association;

(B) The signatures of the persons who constitute the governing body of the homeowner’s association;

(C) Evidence that the person is a full time paid employee or a volunteer employee in good standing of the homeowner’s association; and

(D) Evidence that the person has had at least two years total experience related to:

(i) Wildland fire prevention or suppression; or

(ii) Management of properties which contain forestland.

(5) Accreditation agreements shall include, but will not be limited to:

(a) For a Type 1 Accredited Assessor, a requirement to perform certification services only while currently registered with the Oregon Construction Contractors Board or the Oregon Landscape Contractors Board;

(b) For a Type 2 Accredited Assessor:

(A) A requirement to perform certification services only while acting as an authorized agent of a structural fire service provider; and

(B) A prohibition on collecting either a fee or any other form of remuneration directly from the owner of the lands, for performing certification services;

(c) For a Type 3 Accredited Assessor:

(A) A requirement to perform certification services only while acting as an authorized agent of a homeowner’s association; and

(B) A prohibition on collecting either a fee or any other form of remuneration directly from the owner of the lands, for performing certification services;

(d) A requirement to make a determination of whether a property meets the standards set forth in OAR 629-044-1060 to 629-044-1085 only in a truthful manner;

(e) A requirement to send any required records to the State Forester within a specified period of time;
(f) A requirement to maintain any required records for a minimum of six years; and

(g) A requirement to not perform certification services if:

(A) Notified of a suspension under subsection (6) of this rule; or

(B) Notified of a revocation under subsections (7), (8) or (9) of this rule.

(6) The District Forester may suspend the certification authority of an Accredited Assessor at any time the District Forester determines the Accredited Assessor has failed to comply with all requirements of the accreditation agreement. In taking such action, the District Forester shall:

(a) Suspend the certification authority of an Accredited Assessor only after providing fifteen days prior written notice to the Accredited Assessor;

(b) Not more than fifteen days after suspending the certification authority of an Accredited Assessor, either initiate action for the State Forester to revoke the accreditation of the Accredited Assessor or restore the certification authority of the Accredited Assessor.

(7) The State Forester shall revoke the certification authority of an Accredited Assessor if the District Forester provides evidence that such action is warranted due to a failure of the Accredited Assessor to comply with all requirements of the accreditation agreement. In taking such action, the State Forester shall:

(a) Take the revocation action not more than sixty days after receiving the evidence from the District Forester; and

(b) Revoke the certification authority of an Accredited Assessor only after providing thirty days prior written notice to the Accredited Assessor.

(8) An Accredited Assessor may, not more than 30 days after receipt of the written notice required in subsection (7)(b) of this rule, request a review of the proposed revocation by the State Forester. If such a request is made, the State Forester shall:

(a) Conduct the requested review within 30 days of the receipt of the request; and

(b) Either affirm or cancel the proposed certification revocation action.

(9) An Accredited Assessor who has had their certification authority revoked pursuant to this rule may appeal the decision of the State Forester to the Board of Forestry, in the same manner as appeals under ORS 477.260(2).

Statutory/Other Authority: ORS 477.059
Statutes/Other Implemented: ORS 477.059

History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02

629-044-1110

Special Assessments

(1) When, pursuant to ORS 477.060, the forester assesses the owners of lands classified by a committee, the funds so received shall be:

(a) Allocated exclusively to the forest protection district wherein the lands are located;

(b) Used exclusively for activities pertaining to the lands from which the funds have been received;

(c) Used only in accordance with an annual written plan which may provide for:

(A) The full or partial funding of targeted fire prevention and suppression resources which are needed to minimize cost and risk while maximizing the effectiveness and efficiency of the protection of values at risk from wildfire;

(B) The full or partial funding of projects which will assist, encourage or promote owners to minimize and mitigate wildfire hazards and risks. Examples include:

(i) Providing labor and/or equipment for fuels reduction activities;

(ii) Assisting owners who are physically or financially unable to complete the work necessary to meet the standards set forth in OAR 629-044-1060 to 629-044-1085; and

(iii) Providing rebates for owners who have lands which meet the standards set forth in OAR 629-044-1055 to 629-044-1085.

(C) The full or partial funding of special or unique costs of assessment processing, certification administration, or program administration, so long as such an amount does not exceed $10 per tax lot or parcel of real property.
(2) Assessments levied pursuant to ORS 477.060 shall be:

(a) Levied only after being approved by an advisory and guidance committee, pursuant to ORS 477.240;

(b) Levied on a per tax lot or parcel of real property basis;

(c) Levied in an amount which does not exceed $25 per tax lot or parcel of real property. The determination of lots or parcels of real property shall be made pursuant to ORS 477.295; and

(d) Based on the classification of the lands classified by a committee.

Statutory/Other Authority: ORS 477.060
Statutes/Other Implemented: ORS 477.060
History:
DOF 9-2002, f. 9-19-02, cert. ef.11-15-02
Summary of Wildfire Hazard Zones

Based on [OAR 629-044-0200 to 629-044-0260](1996)

1) Overview

Determination of wildfire hazard zones are based on four criteria. Each of the four factors is ranked 0-3 with 3 being the most hazardous value. **Wildfire hazard zones are those areas where the sum of all the hazards totals 7 or more.** The four factors are:

- Fire weather hazard
- Topography hazard
- Vegetative fuel hazard
- Fuel distribution hazard

We can use a Geographic Information System (GIS) to collect this data into layers, assign the related points to each factor, display it at a variety of scales and summarize it into an overall hazard score. Deschutes County has done preliminary work to acquire and summarize this data in GIS. This data can be displayed in committee meetings. Before we look at the actual data and how it could be summarized the committee should first have an understanding of each factor and how they interact to create potential wildfire hazard zones.
2) Wildfire Hazard Zones 629-044-0220

(1) For the convenience of administration, when practical, a jurisdiction may utilize nearby natural geographic features or land features to delineate the boundaries of Wildfire Hazard Zones.

(2) It is not the intent of OAR 629, division 044 that Wildfire Hazard Zones be determined on a tax lot or an ownership specific basis, but rather that a landscape approach be used.

**Decision point:** The committee will be asked to seek consensus or provide input on what is the appropriate scale (using a landscape approach) and what geographic features or land features should be used, considering the administration of the associated rules the map will be related to (e.g. do not split tax lots, neighborhoods).

3) Fire Weather Hazard Factor 62-044-0230

Deschutes County is assigned one factor, 3, for the entire County. This is assigned by statute. A factor of 3 is the highest risk level for weather hazard. For comparison, Columbia County, northwest of Portland, is categorized as a 2 for weather hazard.

4) Topography Hazard Factor 629-044-0240

Slopes vary throughout the County, USGS topography maps are used to assign points based on the steepness of slopes.

- **Slopes 00–03% = 0**
- **Slopes 03–12% = 1**
- **Slopes 12–20% = 2**
- **Slopes 20+% = 3**

5) Natural Vegetative Fuel Hazard Factor 629-044-0250

Fuel types vary throughout the County. Points are assigned based on the fuel type(s) present, as described beginning on the next page.


The County has acquired the latest Landfire™ data for the fuel models described in INT-122. This data is available at a 30 meter resolution, meaning there is a fuel model estimated for every 30 meter square across the entire county. This data can be summarized over a larger geographic area. This is likely the most consistent and objective data available for use and can be used to inform this hazard factor.

“LANDFIRE (LF) delivers vegetation, fuel, disturbance, and fire regimes geospatial data products for the entire nation. Methods are based on peer-reviewed science from multiple fields. LF products are consistent, comprehensive, and standardized, resulting in multiple applications to fire, fuel, and natural resources.” [Link to metadata](#)
**Decision point:** The committee will be asked to seek consensus or provide input on if this data set should be used. If so, how should it be summarized consistent with the decision called for under section 2? If not, what alternate data should be used?

Points are assigned by fuel type. Fuel hazards are categorized generally into grass, shrub, and timber and further divided into fuel types. Of the 13 total fuel types described in INT-122, OAR 629-044-0250 considers fuel types 1-6 and 8-10. Fuel type 7 is not present in Oregon and fuels types 11-13 are slash fuel types.

- **Little or no natural vegetative fuels present — 0 points**
- **Grass. Very little shrub or timber is present, generally less than one-third of the area. Main fuel is generally less than two feet in height. Fires are surface fires that move rapidly through cured grass and associated material. (Fuel model 1) — 3 points**

![Photo 1](image1.jpg)

*Photo 1.* Western annual grasses such as cheatgrass, medusahead, ryegrass, and fescues.

![Photo 2](image2.jpg)

*Photo 2.* Live oak savanna of the Southwest on the Coronado National Forest.

![Photo 3](image3.jpg)

*Photo 3.* Open pine—grasslands on the Lewis and Clark National Forest.
- **Grass.** Open shrub lands and pine stands or scrub oak stands that cover one-third to two-thirds of the area. Main fuel is generally less than two feet in height. Fires are surface fires that spread primarily through the fine herbaceous fuels, either curing or dead. (Fuel model 2) — **3 points.**

![Photo 4. Open ponderosa pine stand with annual grass understory.](image)

![Photo 5. Scattered sage within grasslands on the Payette National Forest.](image)

- **Grass.** Beach grasses, prairie grasses, marshland grasses and wild or cultivated grains that have not been harvested. Main fuel is generally less than four feet in height, but considerable variation may occur. Fires are the most intense of the grass group and display high rates of spread under the influence of wind. (Fuel model 3) — **3 points.**

![Photo 7. Meadow foxtail in Oregon prairie and meadowland.](image)
• **Shrubs.** Stands of mature shrubs have foliage known for its flammability, such as gorse, manzanita and snowberry. Main fuel is generally six feet or more tall. Fires burn with high intensity and spread very rapidly. (Fuel model 4) — **3 points.**

![Photo 10. Chaparral composed of manzanita and chamise near the Inaja Fire Memorial. Calif.](image)

• **Shrubs.** Young shrubs with little dead material and having foliage not known for its flammability, such as laurel, vine maple and alders. Main fuel is generally three feet tall or less. Fires are generally carried in the surface fuels and are generally not very intense. (Fuel model 5) — **1 point.**

![Photo 13. Green, low shrub fields within timber stands or without overstory are typical. Example is Douglas-fir–snowberry habitat type.](image)

![Photo 14. Regeneration shrublands after fire or other disturbances have a large green fuel component, Sundance Fire, Pack River Area, Idaho.](image)
• **Shrubs.** Older shrubs with foliage having a flammability less than fuel model 4, but more than fuel model 5. Widely spaced juniper and sagebrush are represented by this group. Main fuel is generally less than six feet in height. Fires will drop to the ground at low wind speeds and in stand openings. (Fuel model 6) — 2 points.

![Photo 15. Pinion-juniper with sagebrush near Ely, Nev.: understory mainly sage with some grass intermixed.]

• **Timber.** Areas of timber with little undergrowth and small amounts of litter buildup. Healthy stands of lodgepole pine, spruce, fir and larch are represented by this group. Fires will burn only under severe weather conditions involving high temperatures, low humidities and high winds. (Fuel model 8) — 1 point.

![Photo 22. Surface litter fuels in western hemlock stands of Oregon and Washington.]

![Photo 23. Understory of inland Douglas-fir has little fuel here to add to dead-down litter load.]

![Photo 24. Closed stand of birch-aspen with leaf litter compacted.]

Summary of Wildfire Hazard Zones FINAL - Page 6 of 8
• Timber. Areas of timber with more surface litter than fuel model 8. Closed stands of healthy ponderosa pine and white oak are in this fuel model. Spread of fires will be aided by rolling or blowing leaves. (Fuel model 9) — 2 points.

![Photo 27. Long-needle forest floor litter in ponderosa pine stand near Aberdon, Mont.](image)

• Timber. Areas of timber with heavy buildups of ground litter caused by overmaturity or natural events of wind throw or insect infestations. Fires are difficult to control due to large extent of ground fuel. (Fuel model 10) — 3 points.

![Photo 29. Mixed conifer stand with dead-down woody fuels.](image)

![Photo 30. Spruce habitat type where succession or natural disturbance can produce a heavy downed fuel load.](image)
6) Natural Vegetative Fuel Distribution Hazard Factor 629-044-0260

Fuel distribution varies throughout the County. Points are assigned based on the fuel distribution as a percent of cover as follows.

- 0 to 10% of the area = 0
- 10 to 25% of the area = 1
- 25 to 40% of the area = 2
- 40 to 100% of the area = 3

The County has acquired the latest Landfire™ data for fuel distribution. This data is available at a 30 meter resolution, meaning there is a fuel distribution estimated for every 30 meter square across the entire county. This data can be summarized over a larger geographic area. This is likely the most consistent and objective data available for use.

“LANDFIRE (LF) delivers vegetation, fuel, disturbance, and fire regimes geospatial data products for the entire nation. Methods are based on peer-reviewed science from multiple fields. LF products are consistent, comprehensive, and standardized, resulting in multiple applications to fire, fuel, and natural resources.”  

[Link to metadata]

**Decision point:** The committee will be asked to seek consensus or provide input on if this data set should be used? If so, how should it be summarized consistent with the decision called for under section 2? If not, what alternate data should be used?
Deschutes County Natural Hazards Code and Program Review

Note: Wildfire Hazards Only, Floodplain Chapters Omitted.

Prepared for:
Deschutes County

Prepared by:
Community Planning Workshop

A Program of the Community Service Center
csc.uoregon.edu/cpw
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About the Community Service Center

The Community Service Center (CSC), a research center affiliated with the Department of Planning, Public Policy, and Management at the University of Oregon, is an interdisciplinary organization that assists Oregon communities by providing planning and technical assistance to help solve local issues and improve the quality of life for Oregon residents. The role of the CSC is to link the skills, expertise, and innovation of higher education with the transportation, economic development, and environmental needs of communities and regions in the State of Oregon, thereby providing service to Oregon and learning opportunities to the students involved.

About Community Planning Workshop

Community Planning Workshop (CPW) is an experiential program within the Department of Planning, Public Policy and Management at the University of Oregon. Students work in teams under the direction of faculty and Graduate Teaching Fellows to develop proposals, conduct research, analyze and evaluate alternatives, and make recommendations for possible solutions to planning problems in Oregon communities. The CPW model is unique in many respects, but is transferable to any institution that desires to link pedagogy with community service.

About the Oregon Partnership for Disaster Resilience

The Oregon Partnership for Disaster Resilience (OPDR) is a coalition of public, private, and professional organizations working collectively toward the mission of creating a disaster-resilient and sustainable state. Developed and coordinated by the Community Service Center at the University of Oregon, the OPDR employs a service-learning model to increase community capacity and enhance disaster safety and resilience statewide.
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*Note: Wildfire Hazards Only, Floodplain Chapters Omitted.*
CHAPTER 1: INTRODUCTION

Floods and wildfires are two natural hazards that impact Deschutes County. The Deschutes County Development Code has several provisions that specifically aim to mitigate the effects of these hazards; reduce risk to property, environmental quality, and human safety; and improve recovery time. The code chapters with hazard-specific elements are Title 17: Subdivisions, Title 18: County Zoning, and Title 19: Bend Urban Growth Boundary Zoning Ordinance.

This report includes analysis of the Deschutes County Development Code and the county’s comprehensive plan, how they are interpreted and applied to development, and the implications for natural hazard preparedness. Case studies and model ordinances providing examples of wildfire and flood best management practices are used to support the report’s recommendations.

Background

Deschutes County Community Development Department (CDD) contracted with the University of Oregon’s Community Planning Workshop (CPW) to conduct a review of the Deschutes County Development Code consistent with direction provided in Comprehensive Plan Section 3.5 (Rural Growth/Natural Hazards). The review focused on improving development regulations that address wildfires and flooding.

The intent of this work is to help Deschutes County understand the implications of land-use regulations on development in areas affected by natural hazards and to develop a set of programmatic options on how to best manage those impacts. The project focused on researching best practices for mitigating the effects of wildfire and flood on development.

Strategies to reduce or mitigate risk associated with development in hazardous areas are important to Deschutes County, as the county continues to be the fastest growing in Oregon. Between 2000 and 2013, the population in Deschutes County increased 41% (47,158 people). According to Deschutes County’s population forecast, by 2025 the population is anticipated to grow by 48% (78,300 people), a total population of 240,811. The City of Bend is expected to account for 40% of the population increase, while the rural unincorporated areas of the county are expected to account for 33% of the population increase.

Purpose and Methods

The purpose of this report is to identify and review a range of regulatory standards that Deschutes County can utilize to reduce risk to flood and wildfire hazards. To identify potential strategies, CPW reviewed flood and wildfire ordinances, best practices used to reduce natural hazard risk, and ordinances and programs implemented by other jurisdictions. CPW also identified model ordinances and case studies that include elements applicable and relevant to Deschutes County based on the comparable aspects of the communities and relative similar hazard
danger. The CPW team then worked with County Staff to target sections of the Deschutes County Development Code where it could incorporate higher development standards and best practices.

**Organization of Report**

The report is organized into five chapters, including Chapter One, and two appendices.

**Chapter 2: Strategies for Mitigating Risk** provides an overview of the nature of risks related to development in hazardous areas.

**Chapter 3: Wildfire Hazards** identifies the extent of wildfire risk in Deschutes County, the rate and location of development within the Wildland Urban Interface (WUI), existing wildfire programs, model ordinances and standards, and presents policy options to strengthen the Deschutes County Development Code as it relates to wildfire hazard.

**Chapter 4: Flood Hazards** identifies the extent of flood risk in Deschutes County, the rate and location of development within the Federal Emergency Management Agency’s (FEMA) defined floodplain, existing flood programs, model ordinances and standards, and presents policy options to strengthen the Deschutes County Development Code as it relates to flood hazard.

**Chapter 5: Conclusions and Recommendations** presents a brief review of the project, summarizes the policy options, and prioritizes the recommended policies options.

This report includes two appendices. Appendix A provides case studies related to wildfire. Appendix B provides case studies related to flood.
CHAPTER 2: STRATEGIES FOR MITIGATING RISK

Chapter 2 frames the role that land use planning has in hazard mitigation and underscores the importance of focusing on flood and wildfire hazards by describing federal and state policies that support and promote mitigation strategies.

The Federal and State Policy Framework

Federal Emergency Management Agency

The pre-disaster mitigation role of the Federal Emergency Management Agency (FEMA) is to provide support and assistance to all communities across the nation to preemptively mitigate and respond to emergencies. FEMA offers financial assistance in the form of grant money through programs such as the Hazard Mitigation Grant Program (HMGP) for long-term hazard mitigation following a major disaster, Pre-Disaster Mitigation (PDM) for hazard mitigation planning and projects, and Flood Mitigation Assistance (FMA) for projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP). In the event of a wildfire disaster, the State can request emergency federal assistance from FEMA. FEMA will provide 75% of firefighting costs as part of the Fire Management Assistance Grant Program.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires that state, local, and Indian tribal governments develop and maintain a natural hazards mitigation plan to be eligible to receive mitigation grant assistance. The stated purpose of the act is to “amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act to authorize a program for pre-disaster mitigation, to streamline the administration of disaster relief, to control the Federal costs of disaster assistance, and for other purposes.”

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1 “Hazard Mitigation Grant Program.” Federal Emergency Management Agency. Available at: https://www.fema.gov/hazard-mitigation-grant-program

2 “Pre-Disaster Mitigation Grant Program.” Federal Emergency Management Agency. Available at: https://www.fema.gov/pre-disaster-mitigation-grant-program

3 “Flood Mitigation Assistance Grant Program.” Federal Emergency Management Agency. Available at: https://www.fema.gov/flood-mitigation-assistance-grant-program

4 “Fire Management Assistance Grant Program.” Federal Emergency Management Agency. Available at: https://www.fema.gov/fire-management-assistance-grant-program

State Policy

Oregon Senate Bill 360

The Oregon Forestland-Urban Interface Fire Protection Act, commonly referred to as Senate Bill 360, enlists property owners in 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.⑥

Oregon Statewide Planning Goal 7

Planning for natural hazards is an integral element of Oregon’s statewide land use planning program, which began in 1973 with the passage of Senate Bill 100. All Oregon counties and cities have comprehensive plans and implementing ordinances that are required to comply with the 19 statewide planning goals that direct the state’s policies on land use issues. Statewide land use planning Goal 7, Areas Subject to Natural Hazards, calls for local plans to include inventories, policies, and ordinances to guide development in, or away from, hazard areas in order to protect life and property from natural hazards.

Natural hazards considered for purposes of Goal 7 are: wildfires, floods (coastal and riverine), landslides, earthquakes, tsunamis, and coastal erosion. Local governments may identify and plan for other natural hazards as they apply.

Overview of Natural Hazards in Deschutes County

Table 1 below displays the Natural Hazards Mitigation Plan hazard analysis matrix for Deschutes County (updated 2015). The hazards are listed in rank order from high to low. The table shows that hazard scores are influenced by each of the four categories combined. With considerations for historical events, the probability or likelihood of a particular hazard event occurring, the vulnerability to the community, and the maximum threat or worst-case scenario are listed in the table. Wildfire events rank as one of the top hazard threats to the county (top tier), while flood events are listed as one of the lower-ranked hazards in the county (bottom tier). For local governments, conducting the hazard analysis is a useful step in planning for hazard mitigation, response, and recovery. The method provides the jurisdiction with sense of hazard priorities, but does not predict the occurrence of a particular hazard. Both floods and wildfires are considered a top priority by Deschutes County and can be directly mitigated through land use.

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Table 1 Hazard Analysis Matrix – Deschutes County

<table>
<thead>
<tr>
<th>Hazard</th>
<th>History</th>
<th>Vulnerability</th>
<th>Maximum Threat</th>
<th>Probability</th>
<th>Total Threat Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Storm</td>
<td>20</td>
<td>50</td>
<td>90</td>
<td>70</td>
<td>230</td>
</tr>
<tr>
<td>Wildfire</td>
<td>20</td>
<td>50</td>
<td>80</td>
<td>70</td>
<td>220</td>
</tr>
<tr>
<td>Earthquake (Cascadia)</td>
<td>2</td>
<td>40</td>
<td>100</td>
<td>49</td>
<td>191</td>
</tr>
<tr>
<td>Windstorm</td>
<td>16</td>
<td>20</td>
<td>80</td>
<td>63</td>
<td>179</td>
</tr>
<tr>
<td>Volcano</td>
<td>2</td>
<td>50</td>
<td>100</td>
<td>21</td>
<td>173</td>
</tr>
<tr>
<td>Drought</td>
<td>8</td>
<td>15</td>
<td>70</td>
<td>56</td>
<td>149</td>
</tr>
<tr>
<td>Flood</td>
<td>8</td>
<td>10</td>
<td>40</td>
<td>56</td>
<td>114</td>
</tr>
<tr>
<td>Earthquake (Crustal)</td>
<td>2</td>
<td>5</td>
<td>80</td>
<td>7</td>
<td>94</td>
</tr>
<tr>
<td>Landslide</td>
<td>2</td>
<td>5</td>
<td>40</td>
<td>7</td>
<td>54</td>
</tr>
</tbody>
</table>

Source: Deschutes County NHMP Steering Committee, 2015.

Flooding results when rain and snowmelt creates water flow that exceeds the carrying capacity of rivers, streams, channels, ditches, and other watercourses. In Oregon, flooding is most common from October through April when storms from the Pacific Ocean bring intense rainfall. Most of Oregon’s destructive natural disasters have been floods. Flooding can be aggravated when rain is accompanied by snowmelt and frozen ground; the spring cycle of melting snow is the most common source of flood in the region. The principal types of flood that occur in Deschutes County include: spring/snow melt flooding, warm winter rain-on-snow flooding, ice jams, flash floods, and dam failure. Regular floods have occurred and the principal sources for flood risk in the county include the Deschutes River, the Little Deschutes River, Paulina Creek, Whychus Creek, and Spring River.

Fire is an essential part of Oregon’s ecosystem, but can also pose a serious threat to life and property particularly in the state’s growing rural communities. Wildfires occur in areas with large amounts of flammable vegetation that require a suppression response due to uncontrolled burning. Overgrown forests possess dense fuel loads that burn more intensely and spread more rapidly. Compounding the risk posed by increased fuel loads due to fire prevention efforts is the population growth occurring in forested areas of Deschutes County. As population in the county grows, more residential development is locating in forested lands known as the wildland-urban interface (WUI). Understandably, development within the WUI is associated with significant risk to property and human life in the event of a wildfire.

Climate Change

Current climate models project warmer, drier summers and a decline in typical level of summer precipitation in Oregon. As climate change occurs, lower elevation pine ecosystems in Deschutes County will become increasingly susceptible to the

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effects of changing precipitation patterns. The lower edges of dry pine vegetative zones are expected to be the first to show impacts of long-term changes in available precipitation. Coupled with projected decreases in mountain snowpack due to warmer winter temperatures, Deschutes County is expected to have more frequent wildfires.

National Marine Fisheries Service and Endangered Species

Recent developments between federal agencies could mean significant changes in the way that local communities implement the NFIP. FEMA and the National Marine Fisheries Service (NMFS) have begun consultations to assign new regulations to floodplain development with respect to endangered species.

FEMA has been sued in several states, including Oregon, for failing to consult with the NMFS or the U.S. Fish and Wildlife Service (USFWS) regarding endangered species listed as under the Endangered Species Act (ESA). The lawsuit deals with certain policies that FEMA promotes, specifically policies regarding development in their Special Flood Hazard Areas (SFHA), can negatively impact certain endangered species.

As a result of a 2010 settlement approved in federal court, the Federal Emergency Management Agency (FEMA) is consulting with NMFS and drafting new rules for communities that participate in the National Flood Insurance Program (NFIP) and have waterways bearing salmon or steelhead. In 2005, the Deschutes River was designated by NMFS as a critical habitat for Middle Columbia River Steelhead\(^8\). This designation will factor into the ongoing revision of Deschutes County floodplain development ordinances.

Strategies for Risk Mitigation: Regulatory and Non-Regulatory

Programs and policies discussed in this report can be divided into two major subgroups: regulatory (non-voluntary), or non-regulatory (voluntary). This section describes the functional differences between regulatory and non-regulatory risk mitigation strategies and provides high-level summary of strategies currently employed by Deschutes County.

Regulatory

Regulatory strategies are written instruments containing enforceable rules. They create and constrain rights, duties, and responsibilities. In the case of the Deschutes County Development Code, developments within County jurisdiction must gain regulatory approval and abide by the constraints put forth within. Enforcement can be either proactive – requiring a development plan to meet

\(^8\) National Marine Fisheries Service, Northwest Region. 5-Year Review: Summary & Evaluation of Middle Columbia River Steelhead. Available at:  
http://www.nmfs.noaa.gov/pr/pdfs/species/middlecolumbiariver_steelhead_5yearreview.pdf
certain standards before construction may begin; or reactive – requiring an inspector to ensure that a development is compliant with relevant regulations.

The broad goal of development codes is to protect the public health, safety and welfare and to provide developers and landowners with transparent rules that reduce the risks associated with development. Regulatory natural hazards mitigation strategies discussed in this report are enforceable elements of the Deschutes County Development Code that dictate the location and characteristics of future development activity.

Regulatory policy options presented in this report are based upon model ordinances, best practices, and case studies from the Federal Emergency Management Agency (FEMA), the International Code Council (ICC), the National Fire Protection Association (NFPA), the National Institute for Standards and Testing (NIST), and relevant sections of development codes from jurisdictions that have addressed natural hazard risks similar to those of Deschutes County.

The role of land use planning in hazard mitigation

Land use planning guides and regulates land use so as to ensure land development is efficient, ethical, and prevents land-use conflicts. By regulating the actions of property owners and developers, land use planning has a decisive influence on development patterns. Often, the most desirable lands for residential development are also the most hazardous. Development along riverbanks is popular for its favorable views and convenient water access. However, it places homes at a greater risk for flood damage. Likewise, wildland-urban interface areas are ideal for residents seeking privacy and access to forested areas, but there is an elevated risk of wildfire damage.

Land use planning can shape development in ways that mitigate risk by prescribing regulatory provisions to types of land that are exposed to the risks of natural hazards. Development codes can prohibit development in dangerous locations or regulate development in a manner that minimizes risk.

A key consideration is that land use plans and their implementing ordinances come into effect at the time of a land use action. The implication is that they only apply to development that is subject to the regulation. Most ordinances do not apply retroactively; existing uses are “grandfathered” in and are often not subject to new regulation. That will likely be the case in Deschutes County where thousands of existing structures in the WUI will not be affected by any code amendments.

Non-Regulatory

Non-regulatory tools serve as guidance rather than law, and are often used to complement regulatory policies. These tools rely on voluntary efforts and public support and participation. They can increase awareness and buy-in to programs and are often developed to increase the effectiveness of regulations through education, outreach, incentives, or interagency coordination.

Non-regulatory strategies to mitigate natural hazards are not dependent upon government oversight, but are achieved primarily through public and community
participation. Non-regulatory strategies may rely on the county government for financial and structural support.

Natural Hazards Mitigation Plan

Natural Hazards Mitigation Plans are a planning requirement for local governments to access funds from the Disaster Mitigation Act of 2000. Although the plan is required for pre-disaster funding, its contents are non-regulatory in nature. Rather, it sets forth voluntary goals, objectives, and actions that can increase disaster preparedness or decrease recovery time.

The aim of the Deschutes County Natural Hazards Mitigation Plan is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the county towards building a safer, more disaster resistant community.\(^9\) The Deschutes County Natural Hazards Mitigation Plan is intended to serve many purposes. These include the following:

- Provide a methodical approach to mitigation planning;
- Enhance public awareness and understanding of natural hazards;
- Create a decision-making tool for policy and decision makers;
- Promote compliance with state and federal program requirements;
- Assure coordination of mitigation-related programming;
- Create specific hazard mitigation initiatives that can be incorporated into Deschutes County’s Comprehensive Plan to assist with implementation;
- Document resources for risk reduction and loss prevention.\(^{10}\)

\(^9\) Deschutes County Natural Hazard Mitigation Plan 2015 Update.

\(^{10}\) Ibid
CHAPTER 3: WILDFIRE HAZARDS

This chapter identifies the risk wildfire poses to Deschutes County, the extent of risk, and the rate and location of development affected by wildfire hazard. Following are policy options the county can consider to strengthen the Deschutes County Comprehensive Plan and Development Code. Policy options are presented with descriptions of best practices, identification of the applicable county code sections, and details of economic, administrative, health, or environmental impacts of implementing the policy.

Wildfire risk in Deschutes County

Extent of Wildfire risk areas

Wildfires are a natural and necessary component of many ecosystems across the country. Central Oregon is no exception. Historically, wildfires have shaped the forests and wildlands valued by residents and visitors. These ecosystems are significantly altered due to fire prevention efforts, modern suppression activities and a general lack of large-scale fires, resulting in overgrown forests and wildland-urban interfaces (WUI) with dense fuels that burn more intensely than in the past. Wildfires can be divided into three categories: interface, wildland, and firestorms. Interface fires are the most common wildfires in Deschutes County.¹

Interface fires occur where wildland and developed areas meet (the wildland-urban interface). In these locations, both vegetation and structural development combine to provide fuel. The wildland-urban interface can be divided into three categories: classic wildland-urban interface, mixed wildland-urban interface, and occluded wildland-urban interface.²

1. Classic wildland-urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas.
2. Mixed wildland-urban interface is found in areas of exurban or rural development: isolated homes, subdivisions, resorts and small communities situated in predominantly wildland settings.
3. Occluded wildland-urban interface where islands of wildland vegetation exist within a largely urbanized area.

Population growth has occurred in interface areas. The growth in residential development in interface areas increases the risk of wildfires. Fire has historically been a natural wildland element and can sweep through vegetation adjacent to combustible homes. New residents in rural areas are often surprised to learn that

¹ Deschutes County Natural Hazard Mitigation Plan 2015 Update.
² Ibid
moving away from urban areas puts them more at risk of wildfires since there are fewer readily available fire services in rural areas.

**Rate and Location of Development**

The majority of people across Deschutes County resides in Bend or within the unincorporated areas of the county. Between 2000 and 2013, Deschutes County experienced a 41% increase in population. The County Coordinated Population Forecast projects that by 2025 Deschutes County’s population will increase by about 78,300 people, a 48% increase. In 2000, 48,898 people lived in unincorporated areas of Deschutes County. By 2013, that number had grown by 10.2% to 53,870. Forecasts estimate that the population in currently unincorporated areas will grow to nearly 80,000 by 2025.

Unprotected residential development is an important issue for Deschutes County. There are several examples of residential developments that do not have structural or wildland fire protection. These include the Lower Bridge area east of Sisters, and the Brothers and Hampton areas along Highway 20 on the eastern edge of the county (Figure 1). In addition, there are approximately 100,000 acres of privately owned, largely unimproved rangeland east of Bend that do not have wildland fire protection. In 2013, an additional fire district for the unincorporated community of Alfalfa was created and will be running by the end of 2016 (not shown in Figure 1). This region will cover 64 square miles of unprotected development.

Since a large portion of the county has no fire protection and due to abundance of the fuel types present in some areas, wildland fires can grow quite large, often spreading and becoming threatening to protected areas. Deschutes County developed County Code Section 8.21 outlines a system for private landowners in unprotected areas to respond to the wildland fire threat with defensible space and firebreaks.

Emergency response to wildland fire incidents incurs substantial resource commitments and fiscal costs. The impact on local organizations is demonstrated each fire season. Notable incidents that exemplify the impact on local organizations are Pole Creek (2012), Burgess Road (2013), and Two Bulls (2014). The costs associated with multiple day mobilization of law enforcement, search and rescue, structural fire assets and state fire resources can quickly deplete local and state agency budgets. Depending on the scope and specifics of an individual fire, additional agency and non-governmental support organizations may also be mobilized to help mitigate the impact on citizens and community infrastructure.

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3 Deschutes County Community Development Department, 2014.

4 Deschutes County Natural Hazard Mitigation Plan 2015 Update.

Existing wildfire programs

There are several wildfire mitigation programs at the National, State, and County level that are in effect within Deschutes County. While non-regulatory in nature, they provide useful guidance to the County’s decision makers, residents, and developers. These programs provide frameworks for outreach, education, and coordination regarding the mitigation of wildfire risk. This section outlines the general programs, state programs, and county programs that are in effect in Deschutes County.

National Programs

Healthy Forests Restoration Act: Community Wildfire Protection Plans

In 2003, the US Congress passed the Healthy Forests Restoration Act that directed federal agencies to collaborate with communities in the wildland urban interface to create Community Wildfire Protection Plans (CWPP). CWPPs allow communities to identify and prioritize areas needing hazardous fuels treatment. As of 2015, Deschutes County has seven CWPP’s adopted: Greater Bend, Greater La Pine, Greater Redmond, Greater Sisters Country, Sunriver, Upper Deschutes River Coalition, and East and West Deschutes County. Communities with CWPPs are given priority for funding of hazardous fuels reduction projects carried out under the auspices of the HFRA.

These CWPPs provide consistent analysis of existing fuels and WUI conditions along with recommendations and priorities for hazardous fuels reductions treatments on public and private lands. Community Wildfire Protection Plans allow communities to set wildland urban interface (WUI) boundaries and conducted risk assessments for each community.

Table 2 Deschutes County Community Wildfire Protection Plans

<table>
<thead>
<tr>
<th>CWPP Area</th>
<th>Year Updated</th>
<th>Next Expected Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Bend</td>
<td>2011</td>
<td>2016</td>
</tr>
<tr>
<td>Greater La Pine</td>
<td>2015</td>
<td>2020</td>
</tr>
<tr>
<td>Greater Redmond</td>
<td>2011</td>
<td>2016</td>
</tr>
<tr>
<td>Greater Sisters Country</td>
<td>2014</td>
<td>2019</td>
</tr>
<tr>
<td>Sunriver</td>
<td>2015</td>
<td>2020</td>
</tr>
<tr>
<td>East and West Deschutes County</td>
<td>2012</td>
<td>2017</td>
</tr>
<tr>
<td>Upper Deschutes River Coalition</td>
<td>2013</td>
<td>2018</td>
</tr>
</tbody>
</table>

Source: Project Wildfire

Firewise Communities

Firewise Communities USA is a program that nationally recognized communities that have taken an organized approach to wildfire preparedness. Firewise Communities educate community members on how live with the threat of wildfire and encourage neighbors to work together and take action to prevent loss of property and life. Typically, Firewise Communities have defensible space, well-marked evacuation routes, and community cohesion.

State Programs

Oregon Senate Bill 360 Implementation

The Oregon Department of Forestry (ODF) supplies information about fuel reduction standards to property owners. ODF mails each property owner a certification card, which may be signed and returned to ODF after the fuel reduction standards have been met. Certification relieves a property owner of liability of fire suppression costs if a fire were to occur on the property. If a certification card has not been received by OFD, the state of Oregon may seek to recover certain fire suppression costs from a property owner if a fire originates on the owner’s property, the fuel reduction standards have not been met, and ODF incurs extraordinary suppression costs. The cost-recovery liability under the Oregon Forestland Urban Interface Fire Protection Act is capped at $100,000.

For more generalized information regarding Oregon Senate Bill 360, see page 4 of this document or visit the Oregon Department of Forestry’s website: http://www.oregon.gov/odf/pages/fire/sb360/sb360.aspx.

Oregon Ready, Set, Go!

Oregon Ready, Set, Go! is an online wildfire assessment tool that provides awareness and educational materials to property owners in Wildland Urban Interface. The website allows property owners to enter their home address and identify structural and vegetative information to calculate a wildfire risk score. Based on the score, information will be provided to help reduce the home’s risk including building materials or outside landscaping. This is an educational tool for homeowners that can help protect their life and property as well as keep First Responders safe when fighting fires.


Deschutes County Programs

Project Wildfire

Project Wildfire is a long-term wildfire mitigation strategy that provides for disaster-resistant communities. Its mission is to prevent deaths, injuries, property loss and environmental damage resulting from wildfires in Deschutes County. Created by Deschutes County Ordinance 8.24.010, Project Wildfire is the community organization that facilitates, educates, disseminates and maximizes community efforts toward effective fire planning and mitigation. Project Wildfire organizes community events that help educate the community about wildfire protection strategies and techniques.⁵

FireFree Program

Project Wildfire coordinates the FireFree program, which is an educational program that teaches residents how to protect their homes from wildfire.⁶ The FireFree program and fuels reduction projects yield over 40,000 cubic yards of woody debris each year.

Existing Wildfire Model Ordinances and Standards

The following model ordinances and standards were used in the process of reviewing the County’s development code in addressing wildfire hazard mitigation.

National Fire Protection Association

The National Fire Protection Association (NFPA) is a national non-profit organization that sets national fire safety codes and standards. The codes that NFPA provides are standards that range from building, process, service, design and installation. Besides providing national fire safety codes and standards, the NFPA provides training and education about fire safety and standards.

NFPA 1141: Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas

This standard provides guidance on the development of the community infrastructure necessary to eliminate fire protection problems that result from rapid growth and change.


⁵ Project Wildfire and 2015 Deschutes County Natural Hazard Mitigation Plan

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

This standard provides guidance on individual structure hazards. It requires a new spatial approach to assessing and mitigating wildfire hazards around existing structures and includes improved ignition-resistant requirements for new construction.


This comprehensive wildland-urban interface code establishes minimum regulations for land use and the built environment in designated wildland-urban interface areas using prescriptive and performance-related provisions. It is founded on data collected from tests and fire incidents, technical reports and mitigation strategies from around the world.

http://shop.iccsafe.org/2012-international-wildland-urban-interface-code-soft-cover.html

Policy Options for Deschutes County

This section presents a review of the County’s Comprehensive Plan in regards to land use and wildfire mitigation and identifies potential actions to strengthen current policies. The existing comprehensive plan policy language is shown in italics followed by our comments. Model development code language is shown in italics and underlined.

Review of County Comprehensive Plan Policies

Comprehensive Plan Policy 3.5.11(g):

*Policy 3.5.11(g) Review and revise County Code as needed to: Require new subdivisions and destination resorts to achieve FireWise standards from the beginning of the projects and maintain those standards in perpetuity.*

*Comment:* The Firewise program is inherently flexible since it is a national recognition program; it is not a certificate program and does not have standards to be met. Deschutes County should consider modifying the comprehensive plan to reflect this distinction.

The Firewise Program is, however, guided by NFPA Standards 1141 and 1144. These standards provide specific mitigation actions that bear relevance to the County Development Code. Rather than including NFPA 1141 and 1144 in the Comprehensive Plan, Deschutes County can look to the following review of County Development Code, which is informed by NFPA standards.
Review of County Development Code

This section presents a review of the County’s current development code in regards to land use and wildfire mitigation policies and programs and identifies potential actions to strengthen current codes. In the following section the existing development code language is shown in italics followed by our comments. Model development code is shown in italics and underlined.

Implement a Wildfire Hazard Combining Zone

A wildfire hazard combining zone eliminates the need to individually prescribe wildfire provisions for each base zone. The combining zone could include a number of provisions such as building materials, defensible space, developable slopes, and other mitigation requirements.

Best Practice: Given the prevalence of wildfire risk within Deschutes County, applying development standards to individual base zones may not efficiently regulate development in hazardous areas. Several wildfire-affected cities and counties in the country, such as Ashland, OR and Jefferson County, CO, have adopted combining zones to broadly identify lands potentially at risk for wildfire and require mitigation measures as part of the land planning and development process. By implementing a combining zone in Deschutes County, development standards that mitigate wildfire risk could be more easily interpreted and applied.

Applicable County Code: Title 18 Zoning, 15.04.085 Building and Construction Codes and Regulations in Wildfire Hazard Zones

Implications: Implementing a combining zone would eliminate the need to individually prescribe wildfire provisions for each base zone. Wildfire Hazard Zones are currently depicted on the Deschutes County Wildfire Hazard Areas map, and County Code 15.04.085 already implements this map to apply roofing standards in a manner identical to the function of the proposed combining district. Developers and property owners will benefit from clear, consistent requirements that could be found in a single location within Deschutes County Code Title 18. This combining zone would also have implications that include higher wildfire mitigation measures being addressed to the majority of the county instead of only in Forest Zones.

Prohibit Wooden Shake Building Materials in Wildfire Hazard Zones

Wooden shake building materials pose a serious risk to residents in the event of a wildfire. Combustible wooden building materials can burn from catching a single ember from an upwind fire. Scientific evidence has shown that a home’s structural characteristics are a primary factor in determining ignitability in wildland-urban
interface fires. Prohibiting wooden shake building materials can reduce the likelihood of structural ignition for homes in wildfire hazard zones.

**Best Practice:** Currently the Deschutes County Code allows wooden shake roofs if they are Class B or higher. To attain a Class B rating, a shake roof must be treated with a fire-resistant material. However, this treatment deteriorates relatively quickly in the county’s climate conditions, and it is uncommon for homeowners to retreat their homes as often as is necessary. The simplest way to address this issue is to prohibit wooden shake building materials in areas of the county identified as Wildfire Hazard Zones. This practice would ideally be included as a provision applied within a Wildfire Hazard Combining Zone.

**Applicable County Code:** 15.04.085 Building and Construction Codes and Regulations in Wildfire Hazard Zones

**Implications:** Although wooden shake building materials can be treated and retreated to meet Class B standards, explicitly prohibiting new structures from using shake building materials is the most direct form of addressing the hazard inherent to flammable roofing material. Existing structures could be exempted from this requirement unless a homeowner undertook a significant home improvement project. Regulatory or incentive-based approaches could be considered as a means to replace combustible materials with non-combustible materials.

**Requirements for Defensible Space**

Along with a home’s structural characteristics, a home’s surroundings are the other most important factor in determining home ignitability in wildland-urban interface areas. Defensible space is the most effective way to reduce the risk of structural loss from wildfires that spread into residential areas. Although there are voluntary measures that encourage defensible space in Deschutes County, there are currently no efforts to enforce the practice on a countywide scale.

**Best Practice:** Defensible space requirements can currently be found in a handful of places throughout Deschutes County Code. Forest Use Zones 1 and 2 require three zones of defensible space ranging from nonflammable materials in the immediate vicinity of dwellings and structures, to fuel management tactics between 20 and 100 feet. Defensible space is crucial element of wildfire mitigation, and would ideally be included as a provision applied within a Wildfire Hazard Combining Zone.

**Applicable County Codes:** 17.16.030 Subdivision Information Requirements, 17.16.050 Master Development Plan, 18.113 Destination Resorts, 18.36.70 Fire Siting Standards in Forest Use Zones

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8 ibid
Implications: Proper implementation and maintenance of defensible space could significantly decrease risk to residential development. However, if specific requirements were applied to all structures and dwellings within the County’s Wildfire Hazard Overlay Zone, defensible space inspections could become very time consuming for County Inspectors.

Regulate Development on Steep Slopes

Development on steep slopes puts homes at risk to be in the path of fast-moving wildfires. By either restricting development on steep slopes or requiring additional mitigation measures for homes built on steep slopes, the County can reduce the risk posed to lives and property by wildfire. (See Appendix A: Steep Slopes in Rancho Bernardo, CA).

Best Practice: Topography plays a significant role in the spread of wildfire. Fire spreads much more rapidly up slopes than flat ground, which poses a threat to structures situated on steep slopes. Currently, single-family dwellings are allowed on slopes as steep as 40%. The International Code Council’s Wildfire Hazard Severity Form lists any slope greater than 30% as the maximum risk category. The best practice in regards to development on steep slopes is to regulate development above a certain slope threshold. To be consistent with existing code language the county could set this threshold at 25%, the maximum developable slope in Destination Resort Zones.

Applicable County Code: 18.36.070(C) Fire Siting Standards for Dwellings and Structures in Forest Use Zone 1, 18.40.070(C) Fire Siting Standards for Dwellings and Structures in Forest Use Zone 2, 18.113.070 Destination Resorts Zone

Implications: This best practice option, when combined with defensible space measures, can achieve enhanced resilience to wildfires without impinging on private property rights. Landowners and developers should be encouraged to develop on flat terrain to the greatest degree possible, but providing sensible regulations considers the inevitability of development on slopes.

Wildfire Mitigation Planning for Subdivisions and Destination Resorts

By requiring wildfire mitigation plans before allowing the subdivision of land or placement of a destination resort, the county can ensure that NFPA Standards 1141 and 1144 guide development from its earliest stages.

Best Practice 1: National Fire Protection Association 1141: Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas are nationally approved model standards for development of fire protection and emergency services infrastructure in wildland-urban interfaces. These standards include requirements for road access, 30 feet of separation between buildings, adequate levels of water supply, and fire sprinkler systems.

Best Practice 2: National Fire Protection Association 1144: Standard for Reducing Structure Ignition Hazards from Wildland Fire are nationally approved model standards for assessing wildfire ignition hazards around existing structures. The
standards provide requirements for new construction such as wildfire hazard assessments, mitigation and maintenance plan, and defensible space standards.

**Best Practice 3**: Achieve Firewise Standards or Firewise Recognition. Firewise is a non-regulatory program managed by the NFPA that provides principles or standards that include many NFPA 1141 and 1144 standards. They reflect standards to reduce wildfire ignition to the home through building materials and defensible space around the structure. Communities can receive Firewise Recognition by following five steps that include: a wildfire hazard assessment, creating a community task force, holding an annual Firewise Day, spending $2 per capita on Firewise projects, and submitting an annual report to Firewise documenting the community’s progress.

**Best Practice 4**: City of Ashland Municipal Code 18.62.090 requires subdivisions to submit a Fire Prevention and Control Plan with any application for an outline plan, preliminary plat of a subdivision, or application to partition land when in areas designated Wildfire Hazard areas. Plans include the following items: analysis of the fire hazards on site influenced by existing vegetation and topography, a map showing the areas that are to be cleared of dead, dying, or severely diseased vegetation, a map of areas that will be thinned to reduce the interlocking canopy of trees, tree management plan, areas of Primary and Secondary Fuel Breaks, and roads and driveways sufficient for emergency vehicle access, including the slope of all roads and driveways (See Appendix A: City of Ashland, OR).

**Applicable County Code**: Title 17.16.030 Subdivisions: Informational Requirements, 17.16.050 Master Development Plan, and 18.113 Destination Resorts.

**Implications**: The County Code does not address specific wildfire mitigation requirements for Subdivisions or Destination Resorts. Chapter 18.113 for Destination Resorts does require a wildfire prevention, control and evacuation plan but does not include any specifications regarding that plan. The county could decide to include regulations from NFPA 1141 and 1144 to address adequate access for emergency responders, water supply, non-combustible building materials, defensible space, fire-resistant landscaping, and requirements for a mitigation plan as well as maintenance plan. Implementing standards identified from Firewise, or achieving Firewise recognition, would help ensure that communities prepare for wildfire mitigation prior to development and have a maintenance plan to continue to prevent wildfire risk to homeowners and their properties. These additional wildfire mitigation requirements could be viewed as restrictive and cause higher costs to developers. However, achieving these standards can also be used as a successful marketing tool. A Fire Prevention and Control Plan would ensure that subdivisions have clear plans in place before development. Clear standards and requirements for this plan would assist developers in the project planning process and ensure that maintenance of these standards remain in perpetuity.

**Require Fire Protection Proof for Subdivisions**

Requiring proof of fire protection ensures that a fire district will be able to serve new subdivisions before they are permitted. Although this is not a currently
pressing issue, continued population growth into unincorporated areas could exceed the capacity of rural fire districts.

**Best Practice:** Proof of Fire Protection is a best practice found in the Jefferson County, CO Land Development Regulation Section 4.C.18. It requires a written statement from the appropriate fire district indicating that they will serve the property. If the property is not within a fire district, a contract with the district would need to be established indicating that fire protection to the property will be provided.

**Applicable County Code:** Title 17.16.030 Subdivisions: Informational Requirements

**Implications:** The Deschutes County Code does not currently require proof of fire protection for subdivisions. Requiring proof of fire protection from a fire district to serve the development will help ensure that emergency responders will adequately be able to service the property. If a property is not currently provided fire protection service a contract, or annexation into a fire district, will help ensure fire protection can be provided. This policy could be restrictive to developers and cause service problems for fire districts however; it will ensure that adequate protection can be provided before property is developed.

**Wildfire Mitigation Plan for Single-Family Homes**

Including wildfire mitigation plans as part of the site plan review process for single-family homes ensures that homeowners and developers are mindful of and take an active role in mitigating the risks associated with locating in the wildland-urban interface.

**Best Practice:** Due to the frequency with which homes are being built in wildland areas of Deschutes County, requiring Wildfire Mitigation Plans may be a useful addition to the site plan review process. Including Wildfire Mitigation Plans as required contents for the site plan review process could minimize the loss of lives and property from wildfires. A sample Wildfire Mitigation Plan from Kane County, Utah is as follows:

> A site plan, showing 1) the location and extent of structures and other improvements, the defensible space management zones around the structures, the driveway access for emergency vehicles, emergency water supply for fire fighting, and the locations of other specific natural and human created features; and 2) a narrative that describes in detail these same features.⁹

Another sample of code language from Boulder County Land Use Code Article 4-804.C.12 (See Appendix A: Boulder County, CO):

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A Wildfire Mitigation Plan demonstrating the appropriate site location of structures, construction design and the use of ignition resistant building material, defensible space and fuel reduction around the structures, driveway access for emergency vehicles, and an emergency water supply for fire fighting.

**Applicable County Code:** 18.36.050(A) Standards for Single-Family Dwellings in Forest Use Zone 1 and 2, 18.124.040 Site Plan Review: Contents and Procedure, and 19.76 Site Plan Review.

**Implications:** Wildfire Mitigation Plans would ensure an action and maintenance plan in regards to wildfire be developed prior to construction and occupancy. This would ensure that the homeowner considers wildfire mitigation planning and maintenance before development and in perpetuity. The Plan would ensure the development is built to NFPA standards. It would require additional effort from homeowners and developers prior to development along with the continued maintenance as well as create restrictions to design.

**Wildland Fire Hazard Assessment**

A wildland fire hazard assessment determined through SB360 could be put to use by informing conditional use development in wildland-urban interface areas. If specific mitigation measures should be taken, they would be taken into consideration prior to development.

**Best Practice:** This code does not indicate how the increase in fire hazard, fire suppression costs, or risk to fire suppression personnel would be measured. We suggest the county consider including language stating the fire hazard risk would be determined by a wildland fire hazard assessment. Wildland Fire Hazard Assessments have already been determined through SB360, which could be used to measure the hazard rating and applicable requirements necessary for each parcel. Other examples of this language and assessment can be found in NFPA 1144 Chapter 4, and the ICC International Wildland-Urban Interface Code.

**Applicable County Code:** 18.36.40(B) Conditional Use in Forest Use Zone 1 and 2

**Implications:** A Wildland Hazard Assessment initiated before development would identify the level of risk to a property and ensure adequate mitigation standards are obtained before construction and occupancy. The assessments could require additional staff time; however, they would also provide and educational opportunity to discuss specific mitigation action items for the property to address before development.

**Standards for Road Identification Signs**

Standardized protocols regarding road identification signs and address markers can help emergency responders quickly find their destinations. As population growth into unincorporated areas continues, explicit language can standardize the location and appearance of road and address markers.
Best Practice: The Code does not include language to address road identification signs or markers. Proper signage is important for emergency responders to quickly locate and identify a residence. We recommend the County consider including policies on road and address marking. The International Wildland-Urban Interface Code section 403.4 and 403.6 provide specific language addressing road and address marking. The International Wildland-Urban Interface Code section 403.6 includes specific standards for address identification signs that could help emergency responders quickly and easily locate a residence in danger. An example of this language includes:

“All buildings shall have a permanently posted address, which shall be placed at each driveway entrance and be visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible from the road on which the address is located.”

Applicable County Code: Title 18.36.080 Fire Safety Design Standards for Roads

Implications: Clearly identifiable signage for roads and residences helps emergency responders quickly locate and identify residences in time-sensitive situations.

Wildfire Policy Options Matrix

The following matrix lists each policy options listed in this document, with a condensed breakdown of applicable county code, a description of the policy option, the issues each policy option addresses, the applicability for Deschutes County, and the implications on the county if it were to adopt the option. Sections that are highlighted in gray are areas that the county may want to initiate its code update review process.
| Ref. # | Policy Option                                                                 | Deschutes County Code                                                                 | Description                                                                                   | Issues Addressed                                                                                   | Applicability                                                                                   | Implications of Adoption                                                                 | Planning Commission Comments                                                                 |
|--------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| W1     | Wildfire Hazard Combining Zone                                                   | 15.04.01.R Building and Construction Codes and Regulations: Wildfire Hazard Zones        | Given the prevalence of wildfire risk within Deschutes County, applying transparent and      | All new development on private land in Deschutes County                                            | Eliminates the need to individually describe wildfire provisions for each base zone. Provides   | Commission was interested to see a potential hazard rating system.                               |
|        |                                                                               | Title 18 - County Zoning                                                                 | effective standards to each individual base zone may not be the most effective means of      |                                                                                                 | clear, consistent requirements for developers and property owners. Will require all of the County |                                                                                                  |
|        |                                                                               |                                                                                        | regulating development. By implementing an overlying district in Deschutes County,          |                                                                                                 | to follow higher wildfire regulation standards instead of only the Forest Zones.                |                                                                                                  |
|        |                                                                               |                                                                                        | development standards for mitigating wildfire risk could be more easily interpreted and         |                                                                                                 |                                                                                                |                                                                                                  |
|        |                                                                               |                                                                                        | applied.                                                                                      |                                                                                                 |                                                                                                |                                                                                                  |
| W2     | Building Materials                                                             | 15.04.01.B8.5 Building and Construction Codes and Regulations: Wildfire Hazard Zones   | In order to maintain fire resistance of shake roofs and siding, frequent retreatments are     | New construction; roof replacements. Would require Class A fire rated materials.                  | Although wooden shake building materials can be treated and re-created to meet Class B            | Commission was very interested in this topic.                                                       |
|        |                                                                               | 38.36.010 (d) Structural Standards in Forest Use Zone                                  | required. Since it is unlikely that homeowners will treat their homes as often as necessary,  |                                                                                                 | roofing standards, explicitly prohibiting new structures from using wooden shake building       |                                                                                                  |
|        |                                                                               |                                                                                        | we recommend the County consider specifically prohibiting shake building materials within     |                                                                                                 | materials and the hazard inherent to combustible building materials. Existing structures could   |                                                                                                  |
|        |                                                                               |                                                                                        | 15.04.085.                                                                                   |                                                                                                 | be exempted from this requirement unless a homeowner undertook a significant re-roofing or      |                                                                                                  |
|        |                                                                               |                                                                                        |                                                                                              |                                                                                                 | siding project. Required Class A fire rated materials for roofing.                              |                                                                                                  |
| W3     | Steep Slopes                                                                   | 18.36.010 (b) Fire Service Standards for Dwellings and Structures in Forest Use Zone   | Set a slope grade threshold above which development requirements, such as augmented           | Fire spreads much more rapidly up slopes than on flat ground; which poses a threat to structures   | Applicable to new developments. There are not many developable properties with slopes greater    | No comments were provided.                                                                         |
|        |                                                                               |                                                                                        | defensible space, must be met. To be consistent with existing code language, the County could | situated on steep slopes. Currently, single-family dwellings are allowed on slopes as steep as   | than 25%, a full analysis has yet to be completed.                                             |                                                                                                  |
|        |                                                                               |                                                                                        | set this threshold at 25 percent. This threshold and its requirements would likely be included  | 40% in Forest Use Zones. The best practice in regards to development on steep slopes is to        |                                                                                                  |                                                                                                  |
|        |                                                                               |                                                                                        | as a provision within a Wildfire Hazard Combining Zone.                                      | regulate development above a certain slope threshold.                                            |                                                                                                  |                                                                                                  |
| W4     | Defensible Space                                                                | 17.14.000.X Informational Requirements for Subdivisions                               | Requirements currently stated in 18.36.010.                                          | Defensible space standards are not mentioned for Subdivisions and Destination Resorts as well as  | Applicable to new developments.                                                                | Commission voiced concern about the 100-200 foot buffer zone.                                    |
|        |                                                                               | 17.14.050 Master Development Plan                                                     | Suggestions to include requirements in Subdivisions and Destination Resorts as well as     | include requirements for fire-resistant landscaping.                                            |                                                                                                  | Commission was also interested in including defensible space requirements for Subdivisions and   |
|        |                                                                               | 38.13.003 Destination Resorts                                                        | include requirements for fire-resistant landscaping.                                       |                                                                                                  |                                                                                                  | Destination Resorts and wanted fire-resistant landscaping to be addressed.                      |
| W5     | Subdivision Fire Protection (NFPA 1141)                                        | 17.14.000.X Informational Requirements for Subdivisions                               | The County may want to consider including a provision for Subdivisions and Destination        | Standards would address national best practices for emergency access requirements, road grades,    | Applicable to new developments.                                                                | No comments were provided.                                                                         |
|        |                                                                               | 17.16.050 Master Development Plan                                                     | Requirements for sub division access, building separation, fire protection, and water supply. | building separations to reduce the spread of wildfire, water supply, building materials, and      |                                                                                                  |                                                                                                  |
|        |                                                                               | 38.13.003 Destination Resorts                                                        |                                                                                              | wildfire mitigation planning before development.                                                |                                                                                                  |                                                                                                  |

Source: Community Planning Workshop
<table>
<thead>
<tr>
<th>Ref.</th>
<th>Policy Option</th>
<th>Deschutes County Code</th>
<th>Description</th>
<th>Issues Addressed</th>
<th>Applicability</th>
<th>Implications of Adoption</th>
<th>Planning/Commission Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W6</td>
<td>Structural Ignition Fire Protection (NFPA 1144)</td>
<td>17.16.0.30(12) Informational Requirements for Subdivisions</td>
<td>The County may want to consider including a provision for Subdivisions and Destination Resorts that requires areas at risk of wildfire to achieve specific NFPA 1144 standards. Standards include requirements such as reducing structure ignition through defensible space zones, non-combustible construction materials, hazard mitigation assessments, and wildfire mitigation action and maintenance plans.</td>
<td>Applicable to new developments.</td>
<td>Provides additional protection from wildfire risk. Could require additional costs to developers, however, can also be used as a useful marketing and real estate tool.</td>
<td>No comments were provided.</td>
<td></td>
</tr>
<tr>
<td>W7</td>
<td>Firewise Recognition</td>
<td>17.16.0.30(12) Informational Requirements for Subdivisions</td>
<td>Firewise Recognition or becoming a Firewise Community would help subdivisions create neighborhood action plans to mitigate wildfire from the beginning of development.</td>
<td>Applicable to new developments.</td>
<td>Earn neighborhood national recognition, can reduce insurance premiums, protect community from wildfire risk. Could require additional costs to developers, however, can also be used as a useful marketing and real estate tool.</td>
<td>Commission said this translates well to increased property values and increased safety.</td>
<td></td>
</tr>
<tr>
<td>W8</td>
<td>Fire Protection Proof</td>
<td>17.16.0.30(12) Informational Requirements for Subdivisions</td>
<td>To address requirements for a fire protection system, it would be beneficial to include Fire Protection Proof. Fire Protection Proof requires the applicant to show proof that the property is located within a fire protection district that will serve the property. (Jefferson County, CO)</td>
<td>This requirement would address assurance that a fire district could have the ability to serve the property. If adequate level of service could not be provided, this would alert the fire districts to plan which department could provide the service or if annexation or a new district would need to be created.</td>
<td>Applicable to new developments.</td>
<td>Requires applicants to prove they are protected by a fire protection district unless it places extra administrative pressure on rural fire districts. However, requiring fire protection information prior to subdivision approval can shed light on potential issues that could arise as a result of overcrowding a rural fire district.</td>
<td>No comments were provided.</td>
</tr>
<tr>
<td>W9</td>
<td>Firewise Protection Standards</td>
<td>17.16.0.30(12) Informational Requirements for Subdivisions</td>
<td>Firewise standards include non-flammable roofing materials, requirements for windows, vents, and attachments. Firewise plants, defensible space, and landscape maintenance.</td>
<td>Standards would ensure developments follow national best practice models to reduce wildfire risk by using non-flammable construction materials and fire-resistant landscaping.</td>
<td>Applicable to new developments.</td>
<td>Provides additional protection from wildfire risk. Could require additional costs to developers, however, can also be used as a useful marketing and real estate tool.</td>
<td>No comments were provided.</td>
</tr>
<tr>
<td>W10</td>
<td>Fire Apparatus Access</td>
<td>17.36.260 Fire Hazard</td>
<td>The Deschutes County Code currently requires a minimum of two points of access to a subdivision in a fire hazard area. ICC International Wildland-Urban Interface Code includes additional standard for fire apparatus access in subdivisions. We recommend The County consider these higher standards to ensure adequate access in future subdivisions. Requirements currently found in 18.36.080.</td>
<td>This requirement would explicitly state higher access requirements to be addressed for Subdivisions as cited in the ICC code and in 18.36.260.</td>
<td>Applicable to new developments.</td>
<td>The costs associated with providing additional points of access can be considered by developers as barriers to development. However, higher standards for access help prevent the loss of structures and ensure the safe ingress and egress of fire crews, emergency personnel, and residents.</td>
<td>Commission wanted to clarify that this applies to developments with over 500 dwelling units. Staff will determine the appropriate scale of development to apply this standard.</td>
</tr>
</tbody>
</table>

Source: Community Planning Workshop
### Table 3 Wildfire Policy Options Matrix (continued)

<table>
<thead>
<tr>
<th>Ref. #</th>
<th>Policy Option</th>
<th>Deschutes County Code</th>
<th>Description</th>
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<th>Implications of Adoption</th>
<th>Planning Commission Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W11</td>
<td>Road Address Identification Signs</td>
<td>18.34.090/91</td>
<td>The Code does not include language to address road identification signs or markers. Proper signage is important for emergency responders to quickly locate and identify a residence. We recommend the County consider including policies on road and address marking. The International Wildland-urban Interface Code sections 603.4.4 and 403.6 provide specific language addressing road and address marking.</td>
<td>This requirement would include requirements for proper signage for emergency responders that currently does not exist and would help identify locations in need of emergency.</td>
<td>Applicable to new developments.</td>
<td>Creates accessible signage for emergency responders to quickly locate and identify residences.</td>
<td>No comments were provided.</td>
</tr>
<tr>
<td>W12</td>
<td>Wildland Fire Hazard Assessment</td>
<td>18.34.0401/07/15/16</td>
<td>This section does not indicate how the increase in fire hazard, fire suppression costs, or risk to fire suppression personnel would be measured. We suggest the County consider including language stating the fire/hazard risk would be determined by a wildland fire hazard assessment. Examples of this language and assessment can be found in NFPA 1144 Chapter 4 and the ICC International Wildland-urban Interface Code.</td>
<td>A Wildfire Hazard Assessment initiated before development would identify the level of risk to a property and ensure adequate mitigation standards are obtained before construction and occupancy.</td>
<td>Applicable to new single-family dwellings.</td>
<td>Additional staff time for individual assessments, provides specific mitigation action items for property to address before development</td>
<td>No comments were provided.</td>
</tr>
<tr>
<td>W13</td>
<td>Wildfire Mitigation Plans</td>
<td>18.34.0501/05/06/07</td>
<td>Out of the frequency with which homes are being built in wildland area of Deschutes County, requiring Wildfire Mitigation Plans may be a useful addition to the site plan review process. We recommend the County consider including Wildfire Mitigation Plans as required contents for the site plan review process could minimize the loss of life and property from wildfires. (Kane County, UT; Boulder County, CO; NFPA 1144 Chapter 4-11)</td>
<td>Wildfire Mitigation Plans would ensure an action and maintenance plan in regards to wildfire be developed prior to construction and occupancy. This would ensure that the homeowner considers wildfire mitigation planning and maintenance before development and in perpetuity.</td>
<td>Applicable to new single-family dwellings.</td>
<td>Creates a wildfire mitigation plan at the time of development. Builds and develops land to NFPA standards. Requires additional effort from homeowners and developers as well as restrictions to design.</td>
<td>No comments were provided.</td>
</tr>
<tr>
<td>W14</td>
<td>Fire Prevention and Control Plans</td>
<td>Section 17.16.050/15</td>
<td>The Master Development Plan does not include a requirement for wildfire treatment in the wildfire hazard zone. Fire Prevention and Control Plans address water supply, access, building ignition and fire resistance factors, fire protection systems and equipment, defendable space, and vegetation management. (City of Ashland/International Wildland-urban Interface Code)</td>
<td>Fire Prevention and Control Plans address Subdivisions that did not have clear wildfire prevention plans in place before development. Core standards and requirements for this plan would help developers with their design plan and ensure that maintenance of these standards remain in perpetuity.</td>
<td>Applicable to new developments.</td>
<td>Provides clear expectations for developers, wildfire planning considered in early phases of planning</td>
<td>No comments were provided.</td>
</tr>
</tbody>
</table>

Source: Community Planning Workshop
CHAPTER 5: RECOMMENDATIONS

Based on our review of current Deschutes County Code, CPW identified several areas where language can be expanded upon, language from model ordinances can be added, and language can be condensed to reduce redundancy. The intent of the code review and identification of policy options was to identify code amendments that can enhance the county’s ability to prepare for and recover quickly following a hazard event. For many issues, CPW identify multiple options. The county should carefully examine each option determine which option is most appropriate. All of policy options identified in this report reflect areas that will add safety measures not explicitly seen in current language.

This chapter presents CPW’s recommendations regarding policy options. Our recommendations were informed through two work sessions with the Deschutes County Planning Commission and one work session with the Deschutes County Board of County Commissioners. We also discussed and reviewed the options with Community Development Department staff. Because the code amendments are legislative changes, the county will be required to conduct public hearings for any amendment. Amendments are also subject to review and acknowledgement by the state Land Conservation and Development Commission (LCDC).

Recommendations

To assist county staff in evaluating the policy options presented in this report, we grouped our recommendations into three areas: (1) combining zones; (2) higher standards; and (3) code requirement clarity. At the direction of staff and the Planning Commission, the recommended policy options are prioritized.

Adopt Wildfire and Flood Combining Zones

To more efficiently regulate development in hazardous areas and consistently apply development standards, CPW recommends that the county draft and adopt a wildfire combining zone. We also recommend the county consolidate the Title 18.96 Flood Plain Zone, Title 18.108.190 Flood Plain Combining District, and Title 19.72 Flood Plain Combining Zone into a single Flood Plain Combining Zone within Title 18 of the County Code (County Zoning).

Implementation of a wildfire combining zone will make interpretation and application of development standards easier when mitigating wildfire risk. The creation of a wildfire hazard combining zone would eliminate the need to individually prescribe wildfire provisions for each base zone. Many of the wildfire-specific best practices and standards presented in this report can be included within a combining zone.

Consolidation of the floodplain zone will help to reduce redundancy in the development code, help to eliminate code interpretation challenges, and reduce the potential for code enforcement errors. Furthermore, developers and property
owners benefit from clear, consistent requirements that can be found in a single location within Deschutes County Code Title 18.

**Adopt Higher Standards**

CPW recommends the County review adopt the recommended wildfire and flood standards to increase the safety and well-being in Deschutes County. Wildfire policy options include adoption of National Fire Protection Association (NFPA) regulations 1141 and 1144 and from the International Code Council. These options include:

- **NFPA 1144 and ICC Wildland Fire Hazard Assessment.** We recommend the county adopt standards that require an assessment be initiated before development to identify the level of risk to a property and ensure adequate mitigation standards are obtained before construction and occupancy.

- **NFPA 1141, NFPA 1144, and ICC’s Fire Prevention and Control Plan.** We recommend the county adopt standards that require subdivisions address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, defensible space, and vegetation management.

- **ICC International Fire Code.** We recommend the county adopt standards for road identification signs to improve visibility for emergency responders to locate properties in danger.

CPW recommends the county adopt elements of the NFIP’s Community Rating System as standards. The CRS standards presented to the Board of County Commissioners and county staff include:

- **431.a Protecting Critical Facilities.** Protecting critical facilities is vital to reducing damages caused by flood and improves the county’s ability to respond to the needs of residents during a disaster.

- **432.a.(3) Development Limitations (prohibit hazardous materials).** Prohibiting storage of hazardous materials in the floodplain also reduces adverse impacts by removing materials that may cause contamination during a flood event.

- **432.d Cumulative Substantial Improvements.** Adoption of a substantial improvements policy reduces the future of flood damage by requiring homeowners to bring existing structures into compliance with NFIP regulations. Instead of tracking improvements annually, cumulative substantial improvements track the improvements over the lifetime of the structure.

- **432.e Lower Substantial Improvements Threshold.** The lower substantial threshold standard recommends that the county lower the cost of improvement to less than 50% of the market value structure. Lowering the threshold provides a mechanism that ensures an increased investment in flood hazard areas will receive the needed protection from flood risk.
Increase Clarity in Code Requirements

Increasing clarity in policy requirements for developers and homeowners will reduce potential misinterpretation of the code and ease the process of complying with development requirements.

Wildfire policies that increased clarity include wildfire mitigation plans for subdivisions and single-family homes. Specific wildfire mitigation plans would include requirements such as a wildfire hazard assessment, defensible space standards, emergency vehicle access, and water supply that are clear to developers and homeowners. Lucid policy language for wildfire management plans would help reduce time and costs to prepare the plans and reduce risk to property and lives. Explicit requirements for defensible space and road identification signs are also examples of increasing clarity for developers and homeowners. These policies would also ensure that all applicants consistently comply with the same requirements.

Flood policies that increase transparency include flood definitions. Clear definitions for critical facilities and below-grade-crawlspaces help identify these terms and make standards more transparent for developers and homeowners.

Prioritized Policy Recommendations

This report identifies a range of policy and programmatic options for the county to consider based on model ordinances, best practices, and case studies. Based on input from the Deschutes County Planning Commission and the Board of County Commissioners, CPW prioritizes the policy options in the following order (the policy option is identified within parentheses as found in Tables 3 and 4 above):

- Adopt higher wildfire standards from NFPA 1141, 1144 and the ICC (W5, W6, W14)
- Adopt higher CRS standards: lower substantial improvements threshold, cumulative substantial improvements, protecting critical facilities, and development limitations (F1, F2, F3)
- Implement floodplain and wildfire combining zones (F5, W1)
- Prohibit wooden shake building materials in wildfire hazard zones (W2)
- Require defensible space standards in wildfire hazard zones (W4)
- Apply additional regulations to development on slopes greater than 25% (W3)
- Require Wildfire Mitigation Plans for subdivisions and single-family homes in wildfire hazard zones (W13)
- Require fire protection proof from subdivisions before development (W8)

CPW believes these options will have the biggest impacts in terms of reducing risk from natural hazards of flood and wildfire to property and lives. These model policies, best practices, ordinances, and case studies across the nation and will help the county improve the development process, save costs on rescue efforts, and most importantly reduce risk to the community.
APPENDIX A: WILDFIRE CASE STUDIES

This appendix summarizes case studies from communities around the West that have novel approaches to addressing the wildfire hazard. The following case studies from Boulder County, CO, Ashland, OR and Rancho Bernardo, CA all serve as evidence to support the best practices presented in the body of this document.

Case Studies

Ashland, OR

This case study presents evidence supporting the usefulness of Fire Prevention and Control Plans in hazardous areas. As it is in the same state as Deschutes County, Ashland could serve as a useful example of implementation in Oregon.

Boulder County, CO

This case study describes and evaluates Boulder County’s implementation of Wildfire Mitigation Plans, as well as documents how residents have responded by maintaining defensible space.

Rancho Bernardo, CA

This case study documents the aftermath of a wildfire in Southern California, and demonstrates the dangers of development on steep slopes.
Case Study: City of Ashland, OR

The purpose of this case study is to describe and evaluate the City of Ashland’s use of a Wildfire Hazard Area Zone and Subdivision Fire Prevention & Control Plan. This case study provides a brief background on Ashland’s history of wildfire, describes Ashland’s Wildfire Hazard Area Zone and Subdivision regulations, evaluates the significance of the case study and identifies its relevancy to Deschutes County’s goal of natural hazards mitigation.

Background

Ashland is located in Jackson County in Southern Oregon and is situated in an area of high risk to wildfire. After the region experienced severe losses during the 1987 fire season, the city decided to assess their wildfire risk and develop regulations to mitigate the risk. A site-specific survey was conducted by Ashland’s fire department and Oregon Department of Forestry to map the wildfire hazard areas within the Urban Growth Boundary. It was determined that 1,100 acres in Ashland is categorized as a wildfire hazard area. Some key criteria in the survey included: connectivity of fuel, roofing material, density of vegetation, and slope. Increased development pressure led to a policy change in the wildland urban-interface to their land use code starting in the 1980’s.

Current Regulations/Program

As a result of the wildfire hazard rating mapping process described above, a Wildfire Hazard Zone Overlay was defined in 1992 in land use Chapter 18.62: Physical and Environmental Constraints. The goal of this policy is to provide clear and objective standards regarding wildfire mitigation to property owners. Property owners know exactly what size fuel break they need to install and how to maintain it as well as clear building code requirements. The subdivision code outlines a clear Fire Prevention & Control Plan stressing the need of cooperation between the planning department and fire/emergency management agencies.

Example regulations in Ashland’s Municipal Code 18.62.110 Physical & Environmental Constraints: Development standards for Class E lands (wildfire hazard areas) include:

Ashland Municipal Code 18.62.090 Physical & Environmental Constraints: Development Standards for Wildfire Lands includes subdivision requirements for a Fire Prevention & Control Plan. Elements of this plan include:

• A Fire Prevention and Control Plan shall be required with the submission of any application for an outline plan approval of a Performance Standards Development, preliminary plat of a subdivision, or application to partition lands that contain areas designated as Wildfire Hazard areas.
• Criterion for Approval. The hearing authority shall approve the Fire Prevention and Control Plan when, in addition to the findings required by this chapter, the additional finding is made that the wildfire hazards present on the property have been reduced to a reasonable degree,
balanced with the need to preserve and/or plant a sufficient number of
trees and plants or erosion prevention, wildlife habitat, and aesthetics.

Significance

Since the Wildfire Hazard Zone and Fire Prevention & Control Plan have been in
place, there has not been any loss of property or life to wildfire in that region.
However, this designated wildfire hazard zone is only currently mapped in a small
portion of the city, which is surrounded by many other assessed hazardous areas
without regulation. The City is now requesting for the Wildfire Hazard Area Zone to
be extended to be City-wide so that the entire city would be subject to regulations
such as a ban on wooden shake roofs and use of defensible space and fire-resistant
landscaping.

In 2009, the Siskiyou Fire evacuated 109 home and a school all of which were not
inside the Wildfire Hazard Zone. Again in 2010, the Oak Knoll Fire burned 11
homes, which were also outside the Wildfire Hazard Zone. These wildfires did not
cause any damage inside the Wildfire Hazard Zone, however, were just outside the
border and had the potential to damage other homes. This is the reason why the
City would like to expand this zone to ensure that wildfire does not spread due to
homes not required to follow wildfire prevention measures such as prohibiting
wooden shake roofs and keeping fire-resistant landscaping.

Relevance

Deschutes County currently has stated that the entire county is in a Wildfire Hazard
Zone. The Wildfire Hazard Zone has been defined in the development code in Title
15.04.085, however, there aren’t any regulations associated with it. A Wildfire
Hazard Zone with regulations such as the City of Ashland could be a useful measure
to ensure protection of life and properties from wildfire risk before development
occurs. The County also does not require wildfire mitigation plans prior to
development for subdivisions such as the Fire Prevention & Control Plan with the
City of Ashland. A specific plan requirement with explicit criteria to address would
help developers understand expectations and proactively prevent wildfire risk.

Citations

“City of Ashland, Oregon - Fire – Wildfire Hazard Zone Expansion.” City of Ashland,
http://www.ashland.or.us/Page.asp?NavID=16530

Community Planning Workshop & Oregon Department of Land Conservation &
Development, “Planning for Natural Hazards: Wildfire TRG.” Technical Resource
Case Study: Boulder County, CO

The purpose of this case study is to describe and evaluate Boulder County’s use of a Wildfire Mitigation Plan. This case study provides a brief background on Boulder County’s history of wildfire, describes Boulder County’s regulations, evaluates the significance of the case study and identifies its relevancy to Deschutes County’s goal of natural hazards mitigation.

Background

Boulder County has been facing an increase of population pushing development into the wildland-urban interface. These forested lands have very high risk for wildfire due to fire suppression policies allowing vegetation density to grow to 10-100 times its normal state, steep terrain, drought, high summertime temperatures and high winds. These dangerous conditions along with the increase of population into the wildland-urban interface have increased the challenging ability for emergency responders to protect lives and properties. A devastating fire, the Black Tiger Fire on Sugarloaf Mountain in 1989, burned 2,100 acres, destroyed 44 homes, caused losses of $10 million, and required 500 firefighters to contain the fire. To help reduce the risk of wildfire to lives and properties, Boulder County implemented a requirement in 2000, to all new homes being built in wildfire hazard areas, to include a Wildfire Mitigation Plan.

Current Regulations/Program

The Wildfire Mitigation Plan requirement is for all new homes built in wildfire hazard risk areas. The Plan is to ensure that the home is properly sited before development, creates adequate defensible space, provides for emergency access and water supply, and requires the homeowner to continue routine maintenance around the property to help protect and prevent the spread of wildfire. This Plan is to be submitted with a Building Permit Application and will be part of the review process before a permit is issued.

Significance

Since the implementation of the requirement for Wildfire Mitigation Plans in wildfire hazard risk areas, a 2007 survey found that 97% of residents in Boulder County maintain defensible space. Since the Wildfire Mitigation Plan requirement has been in place, residents have become more aware of the importance of defensible space; and take an active role in mitigating the risks associated with living in wildfire hazard areas.

Relevance

Boulder County and Deschutes County face similar conditions in terms of population change, topography and climate. Like Boulder County, Deschutes County is also facing an increased population moving to the wildland-urban interface into wildfire hazard areas. These hazardous areas contain dense vegetation and sometimes steep slopes. A warmer climate with high summertime
temperatures as well as a newly declared drought has threatened the risk of wildfire.

Currently, Deschutes County does not require homeowners to have a Wildfire Mitigation Plan before development and has only relied on non-regulatory projects from Project Wildfire to reduce dense vegetation. Requiring a Wildfire Mitigation Plan before development with maintenance requirements will help ensure that homes and homeowners are aware and protected in the event of a wildfire.

Citation

Boulder County Community Wildfire Protection Plan. 2011.  
http://www.bouldercounty.org/doc/forest/cwppbooklowres.pdf

Boulder County Land Use Department Publications, Wildfire Mitigation Plan.  
Boulder County. March 14, 2013.  
http://www.bouldercounty.org/doc/forest/w02wildfiremitigationplan.pdf

http://www.bouldercounty.org/property/forest/pages/blacktigerfire.aspx
Case Study: Steep Slopes in Rancho Bernardo, CA

The purpose of this case study is to describe and evaluate the effectiveness of developing on slopes less than 20% in wildfire hazard areas. This case study provides a brief background on the Witch and Guejito wildfires, describes the correlation between structural loss and slopes greater than 20%, and provides reason for this concept’s relevance in Deschutes County. The evaluation of this wildfire event bears direct significance to wildfire mitigation practices in Deschutes County.

Background

The National Institute for Standards and Technology (NIST) was invited by the California Department of Forestry and Fire Prevention (CAL FIRE) to collect post-incident data from fires occurring in October 2007. The case study is focused on the Trails development at Rancho Bernardo, north of San Diego. There were 270 homes in the Trails community, 242 of which were within the fire perimeter. Of those, 74 homes were completely destroyed and 16 were partially damaged. Field measurements included roof type, defensible space, exposure to steep slopes, and several Firewise treatment techniques. The majority of the hazard mitigation treatments evaluated at the Trails Community appeared to be applicable even if they were not all individually effective.

Effects of Development on Steep Slopes

Among the numerous landscape and structural traits observed after the fires, the NIST found a significant pattern of increased destruction to residential structures with increased exposure to slopes greater than 20%. Increasing slope was associated with an increased likelihood for structural damage or destruction.

Table 5 Statistics on Structural Damage/Destruction during the 2007 Witch and Guejito Fires.

<table>
<thead>
<tr>
<th>Slope Category</th>
<th>Total Number of Structures</th>
<th>Number of Structures Damaged/Destroyed</th>
<th>Percentage of Structures Damaged/Destroyed</th>
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<tbody>
<tr>
<td>0-10%</td>
<td>12</td>
<td>1</td>
<td>8.3%</td>
</tr>
<tr>
<td>10-20%</td>
<td>117</td>
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<tr>
<td>40-50%</td>
<td>2</td>
<td>2</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: National Institute for Standards and Technology.

Relevance

Deschutes County currently regulates development on slopes in Title 18.113 Destination Resorts, as well as Title 18.36 and Title 18.40 Forest Use Zones.
Development in Destination Resort development zones is limited to occur on slopes less than 25%. Development in Forest Use Zones is limited to slopes less than 40%. Development in all other zones appears to be unregulated in regards to steep slopes. Given that much of the residential development in Deschutes County’s unincorporated areas occurs in the wildland-urban interface, preemptive measures should be taken - to the greatest extent possible- to reduce the risk of structural damages or destruction resulting from wildfire events. This case study serves as direct evidence that structures exposed to slopes greater than 20% are more likely to be damaged or destroyed in a wildfire event.

Citation