

Lane County

Community Wildfire Protection Plan



Lane County Community Wildfire Protection Plan

Draft Report for:
Lane County, OR

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Lane County Wildfire Risk Assessment:

Lane County Department of Public Works Land Management Division and GIS developed the wildfire risk assessment found in Section 2 of this plan, as well as all of the maps included in the plan. The contributions from the Public Works Department were essential to illustrate the extent of potential losses associated with wildfire within the Lane County wildland-urban interface. Special thanks to the following individuals for their contributions:

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The information on the maps in this plan was derived from Lane County's GIS using existing county, regional and state geographical databases. Care was taken in the creation of these maps, but are provided "as is" using the "best available" data. Lane County cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from Land Surveys may have been used in the creation of these products, in no way does this product represent or constitute a Land Survey. Users are cautioned to field verify information on this product before making any decisions.

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Cover Page Images

The large cover image is of the Triangle Lake School, which was the site of a pilot fuels reduction project completed in association with the development of this plan (Photo courtesy of Oregon Natural Hazard Workgroup). The top inset image is of an Oregon Department of Forestry fuel reduction project (Photo courtesy of: Oregon Department of Forestry). The center inset image is a map of the five Lane County Assessment Areas (Map courtesy of Lane County Public Works). The bottom inset image is of the Firewise workshop held in conjunction with the development of this plan (Photo courtesy of: Oregon Department of Forestry).

Lane County
Community Wildfire Protection Plan
Table of Contents

Executive Summary	i
Section 1: Introduction	1-1
Section 2: Risk Assessment	2-1
Section 3: Community Outreach and Collaboration	3-1
Section 4: Action Plan	4-1
Section 5: Plan Implementation and Maintenance	5-1
Appendix A: Action Item Worksheets	A-1
Appendix B: Implementation and Maintenance Documentation	B-1
Appendix C: Risk Assessment Methods	C-1
Appendix D: Fuel Treatment Types for Lane County	D-1
Appendix E: Landowner Survey Summary	E-1
Appendix F: Stakeholder Interview Summary	F-1
Appendix G: Firewise Workshop Summary	G-1
Appendix H: Wildfire Resources	H-1
Appendix I: Glossary of Terms	I-1

Executive Summary

What is a Community Wildfire Protection Plan?

The Lane County Community Wildfire Protection Plan (CWPP) identifies strategies and priorities for the protection of life, property, and infrastructure in the wildland-urban interface. The CWPP is a shared plan held jointly by the Lane County Board of Commissioners, the Oregon Department of Forestry, and the Lane County Fire Defense Board, and the final contents were mutually agreed upon by all three entities.

The CWPP is a plan for action and will depend upon people and partnerships to carry it forward. The purpose of the CWPP is to provide the following:

1. A foundation for coordination and collaboration among agencies and the public in Lane County to reduce risk to wildfire.
2. An assessment and map of the wildland-urban interface in Lane County.
3. The identification and prioritization of areas for hazardous fuel reduction projects.
4. Recommendations for actions homeowners and local communities can take to reduce the ignitability of structures.
5. Assistance in meeting federal and state planning requirements and qualifying for assistance programs.
6. A framework to support the development of local community fire plans within the county.

Why Develop a Community Wildfire Protection Plan?

Lane County recognizes that reducing the potential impacts of wildland-urban interface fire requires a proactive approach that reaches across jurisdictional boundaries, public and private lands, and the diverse geographic regions of the county. The development of a community wildfire protection plan creates an opportunity to encourage communication between agencies and stakeholders, identify and prioritize community values, assess wildfire risk areas, and increase education and awareness of communities and homeowners.

How is the Plan Organized?

The Lane County CWPP is organized into the following sections:

Section 1: Introduction

The introduction explains the purpose of the CWPP and the process used to develop the plan. This section also briefly describes wildfire history, forest characteristics, wildland-urban interface fire risk, current fire protection frameworks, and existing plans and policies addressing wildfire in Lane County.

Section 2: Risk Assessment

This section, developed by Lane County Land Management, presents the findings from the Lane County Wildfire Risk Assessment including the methods used to develop the assessment, the limitations, ideas for long-term assessment updates and maintenance and key findings.

Section 3: Community Outreach and Collaboration

This section presents the findings from the three outreach efforts, which include the landowner survey, stakeholder interviews, and the Firewise Workshop. The section concludes with a summary of the key issues identified through these community outreach strategies.

Section 4: Action Plan

This section describes the framework and methods used to develop the goals, objectives, and action items that make up the Action Plan.

Section 5: Plan Implementation and Maintenance

This section presents the methods for implementing the Action Plan, the process for prioritizing projects, and a schedule for updating and maintaining the plan.

Appendices:

Appendix A: Action Item Worksheets – Describes in a worksheet the key issues addressed, ideas for implementation, coordination and partner organizations, timeline, and plan goals addressed.

Appendix B: Implementation and Maintenance Documentation – Documents the agendas, meeting minutes, and other outcomes of the CWPP Advisory Committee meetings, as well as the processes of, successes, and lessons learned from the pilot project.

Appendix C: Risk Assessment Methods – Documents the process used to develop the Risk Assessment maps and conclusions.

Appendix D: Fuel Treatment Types for Lane County – Describes and analyzes potential fuel treatment types available for use in Lane County.

Appendix E: Landowner Survey Summary – Describes the purpose, methods and findings of a landowner perception survey.

Appendix F: Stakeholder Interview Summary – Describes the purpose, methods and findings of stakeholder interviews.

Appendix G: Firewise Workshop Summary – Describes the purpose, methods and findings of the Firewise workshop.

Appendix H: Wildfire Resources – Documents existing wildfire resources.

Appendix I: Glossary of Terms – Provides definitions of terms used throughout the Lane County CWPP.

Who Participated in Developing the Plan?

Lane County Emergency Management convened a steering committee to oversee and guide the development of the Lane County CWPP. The steering committee was a collaborative group responsible for making decisions and agreeing upon the final contents of the plan. The members of the steering committee included representatives of the following agencies:

- Lane County Sheriff's Office
- Lane County Fire Defense Board
- Lane County Land Management Division
- Lane County Public Works Department
- Lane County Fire Prevention Cooperative
- Oregon Department of Forestry
- Oregon State Fire Marshal
- United States Forest Service
- Bureau of Land Management

What are the Plan Goals?

The plan goals help to guide the direction of future activities aimed at reducing risk and preventing losses from wildfire. The goals listed here serve as the guiding principles for agencies and organizations as they begin implementing action items.

GOAL 1: Provide countywide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in Lane County.

GOAL 2: Improve community strategies for reducing the impacts of wildland-urban interface fires.

GOAL 3: Promote wildfire risk reduction activities for private and public lands in Lane County.

How are the Action Items Organized?

The plan identifies action items developed through various plan inputs and data collection and research. CWPP activities may be considered for funding through state and federal grant programs, including the National Fire Plan or Title II/Title III funding.

To facilitate implementation, each action item includes information on key issues addressed, ideas for implementation, coordinating and partner organizations, timeline, and plan goals addressed.

Key Issues Addressed:

Each action item includes a list of the key issues that the activity will address. Action items should be fact based and tied directly to issues or needs identified throughout the planning process. Action items can be developed from a number of sources including participants of the planning process, noted deficiencies in local capability, or issues identified through the risk assessment.

Ideas for Implementation:

Each action item includes ideas for implementation and potential resources. This information offers a transition from theory to practice. The ideas for implementation serve as a starting point for this plan. This component of the action items is dynamic as some ideas may be not feasible and new ideas can be added during the plan maintenance process. (For more information on how this plan will be implemented and evaluated, refer to Section 5 of the CWPP).

The action items are suggestions for ways to implement the plan goals. Ideas for implementation include things such as collaboration with relevant organizations, grant programs, tax incentives, human resources, education and outreach, research, and physical manipulation of buildings and infrastructure. A list of potential resources outlines what organization or agency will be most qualified and capable to perform the implementation strategy. Potential resources often include utility companies, non-profits, schools, and other community organizations.

Coordinating Organization:

The coordinating organization is the organization that is willing and able to organize resources, find appropriate funding, and oversee activity implementation, monitoring, and evaluation.

Internal Partners:

Internal partners are within the CWPP advisory committee and may be able to assist in the implementation of action items by providing relevant resources to the coordinating organization.

External Partners:

External partner organizations can assist the coordinating organization in implementing the action items in various functions and may include local, regional, state, or federal agencies, as well as local and regional public and private sector organizations. The internal and external partner organizations listed in the CWPP are potential partners recommended by the project steering committee, but not necessarily contacted during the development of the plan. The coordinating organization should contact the identified partner organizations to see if they are capable of and interested in participation. This initial contact is also to gain a commitment of time and or resources towards completion of the action items.

Timeline:

Action items include both short and long-term activities. Each action item includes an estimate of the timeline for implementation. Short-term action items are activities that may be implemented with existing resources and authorities within one to two years. Long-term action items may require new or additional resources and/or authorities, and may take between one and five years to implement.

How Will the Plan be Implemented?

The Healthy Forest Restoration Act (HFRA) requires that three entities must mutually agree to the final contents of a CWPP:

- Lane County Board of Commissioners;
- Lane County Fire Defense Board; and
- Oregon Department of Forestry

The Lane County CWPP is a shared plan and was developed and implemented based upon a collaborative process. The plan will be adopted by resolution by the Lane County Board of Commissioners and acknowledged by the Lane County Fire Defense Board and Oregon Department of Forestry in order to meet HFRA and Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation requirements. The effectiveness of the Lane County non-regulatory CWPP will be contingent upon the implementation of the plan and action items

identified therein. The action items provide a framework for building and sustaining partnerships to support wildfire risk reduction projects.

Advisory Committee

In accordance with action item 1.1.1, the plan development steering committee will become the advisory committee (the committee), and will: oversee implementation, identify and coordinate funding opportunities and sustain the CWPP. The committee will act as the coordinating body and serve as a centralized resource for wildfire risk reduction and wildland-urban interface issues in Lane County.

Additional roles and responsibilities of the committee include:

- Serving as the local evaluation committee for wildfire funding programs such as National Fire Plan grants, Senate Bill 360, and the Pre-Disaster Mitigation program;
- Developing and coordinating ad hoc and/or standing subcommittees as needed;
- Prioritizing and recommending funding wildfire risk reduction projects;
- Documenting successes and lessons learned; and
- Evaluating and updating the CWPP in accordance with the prescribed maintenance schedule.

Co-Conveners

Lane County Emergency Management and Lane County Land Management Division will serve as co-conveners to oversee the plan's implementation and maintenance. They will co-chair the CWPP advisory committee and fulfill the chair responsibilities. These two entities will be responsible for calling meetings to order at scheduled times or when issues arise, (e.g., when funding becomes available or following a major wildfire event).

Emergency Management roles:

- Coordinate committee meeting dates, times, locations, agendas, and member notification;
- Document outcomes of committee meetings in CWPP Appendix;
- Serve as a communication conduit between the committee and key plan stakeholders, (e.g., monthly meetings of the Fire Defense Board); and
- Identify emergency management related funding sources for wildfire mitigation projects.

Land Management roles:

- Serve as gatekeeper to the project prioritization process;
- Incorporate, maintain, and update Lane County's Wildland-Urban Interface Risk Assessment GIS data elements (Action 2.2.3); and
- Utilize the Lane County Wildland-Urban Interface Risk Assessment as a tool for prioritizing proposed fuel reduction projects (Action 2.3.1).

Section 1

Introduction

Plan Purpose

The Lane County Community Wildfire Protection Plan (CWPP) identifies strategies and priorities for the protection of life, property, and infrastructure in the wildland-urban interface. The CWPP is a shared plan administered jointly by the Lane County Board of Commissioners, the Oregon Department of Forestry, and the Lane County Fire Defense Board; the contents of this plan were mutually agreed upon by all three entities.

The CWPP is an action plan and depends upon people and partnerships to carry it forward. The purpose of the CWPP is to provide the following:

- A foundation for coordination and collaboration among agencies and the public in Lane County to reduce risk to wildfire.
- An assessment and map of the wildland-urban interface in Lane County.
- Identification and prioritization of areas for hazardous fuel reduction projects.
- A set of recommendations for actions homeowners and local communities can take to reduce the ignitability of structures.
- Assistance in meeting federal and state planning requirements and qualifying for assistance programs.
- A framework to support the development of local community fire plans within the county.

Why Develop a Community Wildfire Protection Plan?

The development of structures in and near forestlands exposes greater numbers of people and property to the wildfire hazard. In 2002, one of the worst fire seasons in recent history, wildfires burned nearly seven million acres and 2,000 buildings across the United States. In 2003, wildfires destroyed 4,090 homes, primarily in California.¹

According to the Oregon State Natural Hazards Mitigation Plan, “over 41 million acres of forest and rangeland in Oregon are susceptible to wildfire.”² The wildland-urban interface—the area where human development mixes with forestland—is growing in many Oregon communities. According to the State Natural Hazards Risk Assessment, Lane County has a high probability of and vulnerability to wildland-urban interface.³

The destruction caused by recent fire seasons illustrates that fire response and emergency management efforts alone are not enough to prevent losses.

Reducing a community's risk to wildfire is a shared responsibility that requires the participation of federal, state, and local government agencies, the private sector, and citizens. Risk reduction strategies are most effective when organized at the local level. Through community-based fire planning it is possible to address the specific values and needs of a local community and to build citizen awareness of living in a fire prone area.

The dramatic losses of the 2002 and 2003 fire seasons increased public awareness of wildfire risk and contributed to the Federal government's adoption of the National Fire Plan and the Healthy Forests Restoration Act of 2003 (HFRA). This legislation encourages improved intergovernmental collaboration and increased partnerships between public and private entities to implement vegetative fuel reduction projects and improve risk reduction activities in at-risk communities. HFRA also encourages local communities to create their own strategies for wildfire mitigation through development of a community wildfire protection plan.

Lane County recognizes that reducing the potential impacts of wildland-urban interface fire requires a proactive approach that reaches across jurisdictional boundaries, public and private lands, and the diverse geographic regions of the County. The development of a community wildfire protection plan creates an opportunity to encourage communication between agencies and stakeholders, identify and prioritize community values, assess wildfire risk areas, and increase education and awareness of communities and homeowners.

In December of 2004, the Lane County Board of Commissioners directed County Staff to work collaboratively with fire protection districts and federal and state agencies to develop a community wildfire protection plan, using funding from Title III of the Secure Rural Schools and Community Self-Determination Act. The planning process was designed to meet the funding eligibility requirements of the National Fire Plan, the HFRA of 2003, and the Pre-Disaster Mitigation Program of the Federal Emergency Management Agency.

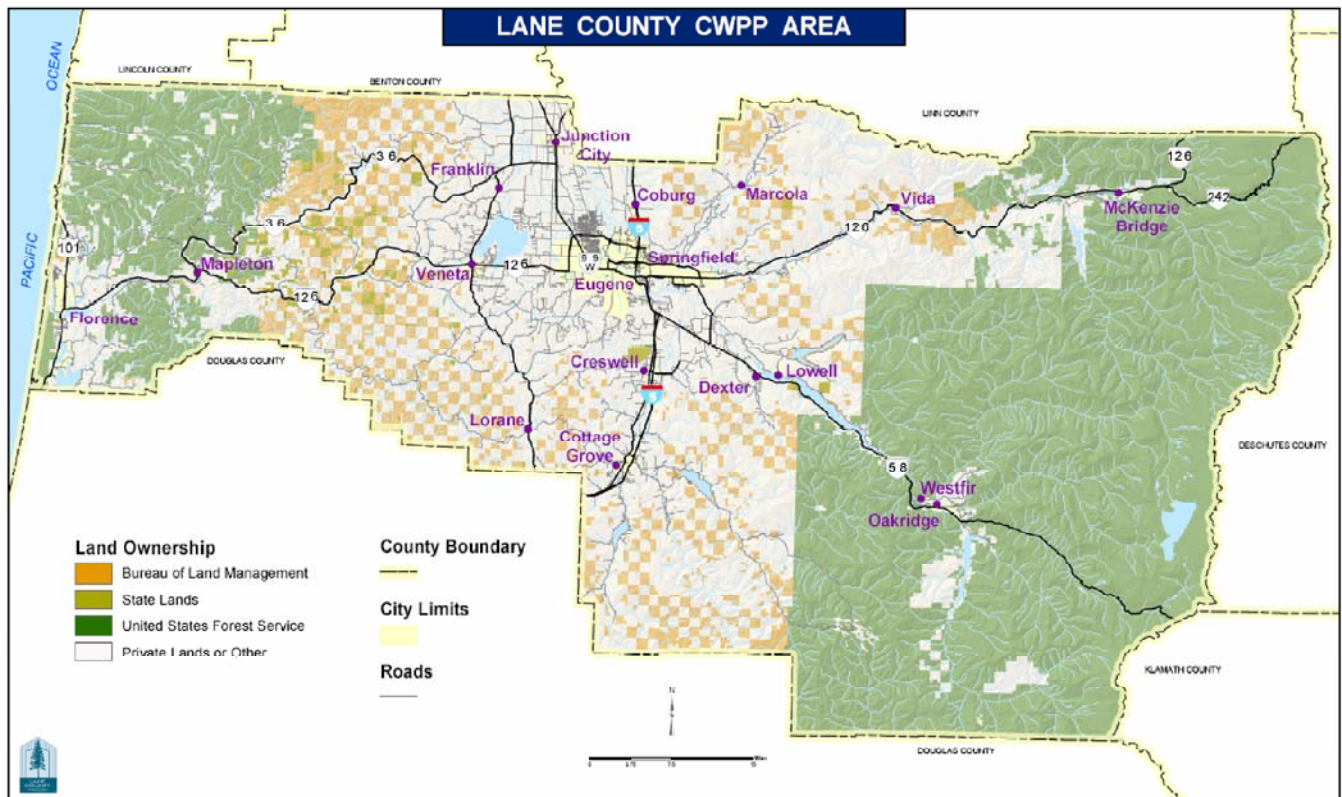
The Lane County CWPP focuses on achieving the three minimum requirements for community wildfire protection plans described by the HFRA:

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

What area will the CWPP affect?

Lane County covers 2.9 million acres, stretching from the Pacific Ocean to the Crest of the Cascade Mountains. Nearly 90% of the County is forestlands. In a county this size, identifying high-risk areas and carrying out public outreach efforts at a meaningful scale is difficult. The Lane County CWPP addresses issues of scale and the County's diverse geography, population, and land management authorities by dividing the County into five assessment areas based roughly on watershed boundaries. The plan identifies general areas with high wildfire risk and provides a framework of technical support and guidance to assist local communities in developing and refining their own community wildfire protection plans and risk assessments. The CWPP does not have authority over incorporated communities within the County, but seeks to develop strategies for sharing information and resources between the county and local communities.

Figure 1.1: Lane County CWPP Area Map



Source: Lane County Public Works GIS, 2005

How is the CWPP organized?

The Lane County CWPP is organized into the following sections:

Section 1: Introduction

The Introduction explains the purpose of the CWPP and process used to develop the plan. This section also briefly describes wildfire history, forest characteristics, wildland-urban interface fire risk, current fire protection frameworks, and existing plans and policies addressing wildfire in Lane County.

Section 2: Risk Assessment

This section, developed by Lane County Land Management, presents the findings from the Lane County Wildfire Risk Assessment including the methods used to develop the assessment, the limitations, ideas for long-term assessment updates and maintenance and key findings.

Section 3: Community Outreach and Collaboration

This section presents the findings from the three outreach efforts, which include the landowner survey, stakeholder interviews, and the Firewise Workshop. The section concludes with a summary of the key issues identified through these community outreach efforts.

Section 4: Action Plan

This section describes the framework and methods used to develop the goals, objectives, and action items that make up the Action Plan.

Section 5: Plan Implementation and Maintenance

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Appendices

Appendix A: Action Item Worksheets – Describes in a worksheet, the key issues addressed, ideas for implementation, coordination and partner organizations, timeline, and plan goals addressed.

Appendix B: Implementation and Maintenance Documentation – Documents the agendas, meeting minutes, and other outcomes of the CWPP Advisory Committee meetings, as well as the processes of, successes, and lessons learned from pilot project.

Appendix C: Risk Assessment Methods – Documents the process used to develop the Risk Assessment maps and conclusions.

Appendix D: Fuel Treatment Types for Lane County – Describes and analyzes potential fuel treatment types available for use in Lane County.

Appendix E: Landowner Survey Summary – Describes the purpose, methods and findings of a landowner perception survey.

Appendix F: Stakeholder Interview Summary – Describes the purpose, methods and findings of stakeholder interviews.

Appendix G: Firewise Workshop Summary – Describes the purpose, methods and findings of the Firewise workshop.

Appendix H: Wildfire Resources – Documents existing wildfire resources.

Appendix I: Glossary of Terms – Provides definitions of terms used throughout the Lane County CWPP.

Planning Process and Methods

Oregon Natural Hazards Workgroup and Lane County Emergency Management designed the Lane County CWPP planning process based upon the requirements of the HFRA, the Pre-Disaster Mitigation program, and the guidelines in the *Preparing a Community Wildfire Protection Plan*⁴ handbook.

The planning process for the Lane County CWPP reflects the collaborative emphasis of the Healthy Forests Restoration Act requirements. Collaboration is the process of bringing different stakeholders together to address a problem by identifying common goals and finding consensus on potential solutions. A collaborative plan recognizes that the implementation process and its outcomes are more successful when support comes from multiple sources throughout the community. Collaboration ensures that the final document reflects the community's highest priorities.

Why Collaboration?

Here are a few of the benefits of a collaborative planning process:

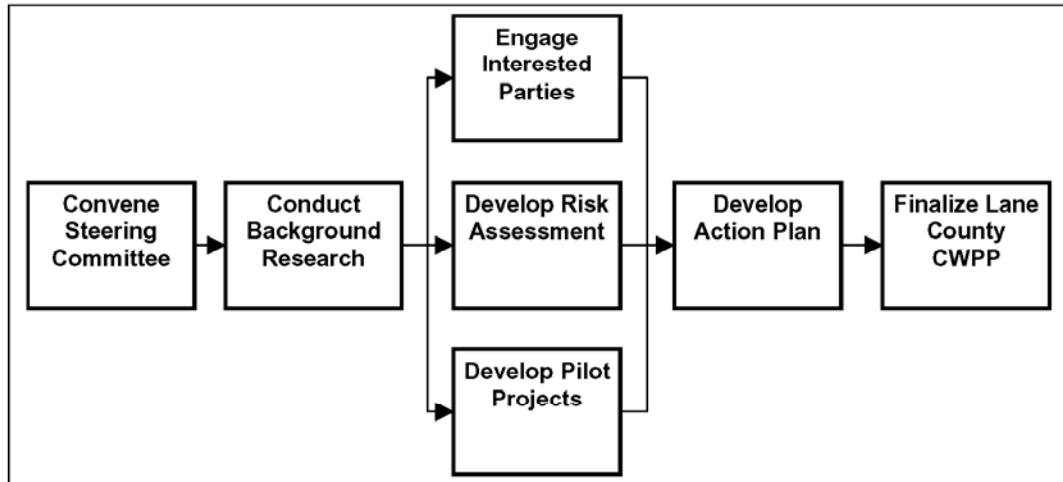
- Defines common values and goals
- Builds understanding of different perspectives
- Reduces conflicts
- Increases ownership in and support of decisions
- Increases legitimacy of final product

Source: Wondolleck and Yaffee. 2000. *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*.

Steps to Developing Lane County's CWPP:

The following section summarizes the steps of the Lane County CWPP planning process. The steps are portrayed graphically in *Figure 1.2*.

Figure 1.2: The Lane County CWPP Planning Process



Source: ONHW/CPW, 2005

Step I. Convene Steering Committee and Engage Federal Partners

Lane County Emergency Management convened a steering committee to oversee and guide the development of the Lane County CWPP. The steering committee is a collaborative group responsible for making decisions and agreeing upon the final contents of the plan. The members of the steering committee included representatives of the following agencies:

- Lane County Sheriff's Office
- Lane County Fire Defense Board
- Lane County Land Management Division
- Lane County Public Works Department
- Lane County Fire Prevention Cooperative
- Oregon Department of Forestry
- Oregon State Fire Marshal
- U.S. Forest Service
- Bureau of Land Management

Step II. Research Existing Wildfire Resources, Plans, and Policies

Background research was conducted prior to beginning the planning process for the Lane County CWPP. ONHW reviewed existing federal, state, and local policies and plans related to wildfire planning, protection, or mitigation, as well as recent community wildfire plans from across the nation. Other background information included recent research by the U.S. Forest Service and other literature on wildland-urban interface fire.

Step III. Engage Interested Parties and Stakeholders

The steering committee used a three-tiered process to engage stakeholders in the development of the Lane County CWPP:

1. Landowner Survey - A survey was mailed to 1,500 randomly selected landowners from areas in Lane County. The survey questions were designed to gain information about landowners' perceptions of wildfire risk and assess their attitudes towards potential actions that communities and homeowners can take to reduce their risk of wildfire.
2. Stakeholder Interviews - ONHW conducted phone interviews with key stakeholders to gain information about key issues, concerns, and current activities related to the Lane County CWPP objectives of collaboration, prioritization of fuel reduction projects, and treatment of structural ignitability.
3. Firewise Workshop - Oregon Department of Forestry and ONHW invited stakeholders such as agency staff, planners, developers, realtors, insurers, utility providers, and non-profit organizations to attend a Firewise Communities workshop. The workshop sought stakeholder participation in identifying obstacles and opportunities to reducing wildfire risk in Lane County.

Step IV. Develop a Community Base Map and Wildfire Risk Assessment:

Using GIS technology and information from the Oregon Department of Forestry and the Bureau of Land Management, Lane County Department of Public Works created a base map of the community and adjacent land important to the CWPP. The map identifies inhabited areas containing critical human infrastructure that are at risk from wildfire and preliminarily designates Lane County's wildland-urban interface zone.

The County adapted a statewide risk assessment methodology from the Oregon Department of Forestry to evaluate wildfire risk. The County also conducted a survey of rural fire protection districts to gather data related to the known wildland urban-interface fire threats and protection capabilities at the fire district level. The following risk factors were assessed to determine the risk rating:

Risk: Assesses the potential and frequency that wildfire ignitions may occur by analyzing historical ignitions over the past 10 years.

Hazard: The natural conditions including vegetative fuels, weather, topographic features that may contribute to and affect the behavior of wildfire.

Values: The people, property, and essential infrastructure that may suffer losses in a wildfire event.

Protection Capability: The ability to both plan and prepare for, as well as respond to and suppress, structural and wildland fires.

The risk assessment also provides a process for the prioritization of areas for hazardous fuel reduction treatments to protect at-risk communities and essential infrastructure as required by the HFRA.

Step V. Develop Pilot Projects

The steering committee identified two sites for pilot projects to demonstrate fuels reduction projects and document lessons learned. The Oregon Department of Forestry worked with Northwest Youth Corps and local community members to reduce fuels at the Triangle Lake School in Blachly, Oregon. The outcome of this pilot project is documented in *Appendix B: Implementation and Maintenance Documentation*. The second pilot project, a fuels reduction project at the Eugene Water and Electric Board's substation facility in Leaburg, was still under development at the time that the plan was finalized.

Step VI. Develop an Action Plan and Project Prioritization Method

The findings from the wildfire risk assessment and the input from interested parties and stakeholders were used to create an action plan for the Lane County CWPP. The action plan identifies the goals, objectives, and action items for carrying out wildfire risk reduction strategies in the county. The action plan also establishes roles and responsibilities, funding, and timetables for implementing action items.

The steering committee developed a process for prioritizing community hazard reduction projects that utilizes the countywide risk assessment. The prioritization process is part of the implementation and maintenance component of the plan and helps to ensure that mitigation funding is used efficiently and effectively.

Step VII. Finalize Community Wildfire Protection Plan

ONHW presented a draft CWPP to the steering committee on May 24, 2005 for review and comment. The steering committee-approved document was presented to the Lane County Board of County Commissioners on July 13, 2005. The plan was adopted by resolution on xx.

The following entities approved the final document, pursuant to the HFRA:

1. The Lane County Board of Commissioners
2. The Lane County Fire Defense Board
3. The Oregon Department of Forestry

Lane County Background

Wildfire History

Wildfire plays a critical ecological role in many ecosystems across the country, including those in Lane County. Native Americans annually burned large areas of the Willamette Valley and coastal valleys to help maintain grasslands and savannahs.⁵ Forest fires were relatively infrequent, although their size and severity often were large. Between 1846 and 1853, a series of large fires burned over 800,000 acres in the central Oregon Coast Range.⁶

The disruption of natural fire cycles over the last century has created dangerous vegetative fuel loads and forests vulnerable to catastrophic wildfires. Logging came to the region in the early twentieth century, combining with fire to change the landscape of the Coast Range and western Cascades.⁷ During and after World War II, an emphasis on better wildland fire suppression and fire prevention dramatically reduced damage caused by wildfires. More people moved into suburban areas during this same period, increasing the wildland-urban interface.⁸ Oregon Department of Forestry statistics indicate that the trend in the number of wildfires is decreasing, but the number of acres and structures burned by those remaining fires is growing.⁹

There are many examples of disastrous fires, both in Lane County and in surrounding counties that share similar landscape characteristics. In 1910, the Nelson Mountain Fire burned many areas that are now state forestlands in Lane County. Large fires burned again in western Lane County in 1917, 1922, and 1929.¹⁰ The 1966 Oxbow Fire, started by a faulty spark arrester, burned 44,000 acres in the County.¹¹ An example of a catastrophic wildfire in an ecoregion similar to Lane County is the 1933 Tillamook County Fire, which burned 240,000 acres. For more information on the history, demographics, and other characteristics of Lane County, refer to the *Lane County Community Profile in the County's Natural Hazard Mitigation Plan*.

Lane County Communities At-Risk to Wildfire

To help states and counties identify the at-risk communities within their borders, various state and federal agencies across the country worked together collaboratively to update a national list of "Communities in the

Vicinity of Federal Lands at Risk from Wildfire.”¹² To identify at-risk communities, state agencies used a process created by an interagency group at the national level which describes the risk factors associated with at-risk communities.¹³ The updated list of at-risk communities across the country was published in the *Federal Register* on August 17, 2001. The at-risk communities within Lane County as identified by the *Federal Register* include the following: Black Butte, Cloverdate, Coburg, Dexter, Dorena, Dunes City, Florence, Lorane, Mapleton, Marcola, Springfield, Swisshome, Triangle Lake, and Walton.

Forest Characteristics

Historic wildfire regimes played a predominant role in the development of the forests of Lane County. Natural cycles of fire disturbance influence all facets of ecosystem dynamics from structure and composition to wildlife habitat and nutrient cycling. Fire suppression, timber harvesting, the introduction of exotic species, and other human factors have disturbed natural fire cycles. West of the Cascade Mountains, fire frequency and severity depend upon environmental variables, such as temperature, moisture, ignitions, and broad, fire-driving winds.¹⁴

Lane County is made up of three distinct ecoregions with differing vegetative, geographic, and fire regime characteristics.¹⁵ These ecoregions are described below:

Willamette Valley : The Valley landforms include floodplains and terraces that are interlaced with surrounding rolling hills. The natural vegetation includes Cottonwood, Alder, Oregon Ash, and Big Leaf Maple. Douglas Fir and Western Red Cedar occur in moister areas. The Valley has lower precipitation, warmer temperatures, and fire regimes of higher frequency and lower severity than adjacent Cascades or Coast Range.

Coast Range: This ecoregion is characterized by steep, highly dissected slopes with narrow ridges. The natural vegetation includes forests of Douglas Fir, Western Hemlock, Western Red Cedar, and Sitka Spruce.

Western Cascades: This ecoregion is characterized by ridge crests at similar elevations, separated by steep valleys. The natural vegetation consists of forests of Douglas Fir and Western Hemlock at lower elevations and Silver Fir and Mountain Hemlock at higher elevations.

Throughout Lane County, Douglas Fir and Western Hemlock are the most predominant forest types.¹⁶ Fire regimes in moist Douglas-fir habitat types are mixed, ranging from low to moderate severity surface fires at relatively frequent intervals (7 to 20 years) to severe crown fires at long intervals (50 to 400 years).¹⁷ Significant annual precipitation and low occurrence of lightning throughout much of Lane County contribute to a low probability of natural fire ignitions in many areas. However, the high vegetative fuel loads are vulnerable to catastrophic fire once ignited. Catastrophic fires are those that “burn more intensely than the natural or historical range of variability,

thereby fundamentally changing the ecosystem, destroying communities and/or rare or threatened species/habitat, or causing unacceptable erosion.”¹⁸

Current Wildfire Protection Framework

Several agencies share responsibility for fire protection in Lane County; these roles are described in the Lane County Emergency Operations Plan.

“The City of Eugene and City of Springfield Fire Departments provide emergency fire services to the most densely populated and developed areas of Lane County. Much of the remainder of the County’s fire protection lies within the jurisdictions of the agencies that make up the Lane County Fire Defense Board and the Western Lane/Douglas County’s Fire Defense Board. The Oregon Department of Forestry is responsible for fire protection on all state-owned forestland, privately owned lands, and Bureau of Land Management lands. The U.S. Forest Service are responsible for national forest lands.”¹⁹

In addition to response capabilities, many fire agencies in Lane County play a role in education and outreach. The Oregon State Fire Marshal provides technical assistance to rural fire protection districts and unprotected areas in the wildland-urban interface. The Oregon Department of Forestry has received funding through National Fire Plan grants for fuel reduction projects and community-level fire protection plans. The Lane County Fire Prevention Co-op facilitates interagency cooperation for the local delivery of fire prevention education messages. *Table 1.2* on the next page portrays the current wildfire protection framework in Lane County, including the roles and responsibilities of federal, state, and local fire protection agencies.

Table 1.2: Current Wildfire Protection Framework

<u>Federal</u>	<u>State</u>	<u>Municipal</u>	<u>County</u>
<p>US Forest Service (USFS) and Bureau of Land Management (BLM)</p> <ul style="list-style-type: none"> ◆ Manages the majority of Lane County’s 2.5 million acres of F1 zoned forestlands. ◆ USFS participates in first response and co-op agreements with Oregon Department of Forestry. ◆ BLM contracts with Oregon Department of Forestry for wildland protection on lands within ODF district boundaries. 	<p>Oregon Department of Forestry</p> <ul style="list-style-type: none"> ◆ Provides wildland protection on 1.4 million acres in Lane County on state owned and state protected lands within district boundaries. ◆ Contracts with private lands to provide wildland fire protection outside of district boundaries. ◆ Participates in first-response agreements with all adjoining counties and with co-op agreements with USFS. ◆ Provides protection to BLM lands within district boundaries by contract. ◆ Promotes education, outreach, and prevention activities. <p>Oregon State Fire Marshal</p> <ul style="list-style-type: none"> ◆ Provides technical assistance to local fire departments and unprotected areas. ◆ Promotes education and outreach in the wildland-urban interface. ◆ Adopted the Oregon Fire Service Mobilization Plan. 	<p>City Fire Departments</p> <ul style="list-style-type: none"> ◆ Provide structural fire protection within city limits. ◆ Cities without fire departments contract with rural fire districts for emergency protection. ◆ The cities of Cottage Grove, Eugene, Florence, Junction City, Springfield, Oakridge and Westfir provide fire services inside their own city limits. 	<p>Rural Fire Districts</p> <ul style="list-style-type: none"> ◆ 24 Rural Fire Districts within Lane County. ◆ Provide structural fire protection within district boundaries throughout the county. <p>Lane County Fire Defense Board</p> <ul style="list-style-type: none"> ◆ Has mutual aid agreements among the 24 rural fire protection agencies in the county and Oregon Department of Forestry. ◆ Focuses on the operational side of fire response. <p>Lane County Fire Prevention Co-op</p> <ul style="list-style-type: none"> ◆ Facilitates interagency cooperation in the local delivery of wildfire fire prevention messages and materials ◆ Includes some of the members of the Lane County Fire Defense Board, as well as USFS and BLM

Source: ONHW/CPW, 2005

Existing Plans and Policies

The CWPP is non-regulatory in nature, meaning that it does not set forth any new policy. The plan does provide (1) a foundation for coordination and collaboration among agencies and the public in Lane County, (2) identification and prioritization of areas for hazardous fuel reduction projects and other mitigation activities, and (3) assistance meeting federal and state planning requirements and qualifying for assistance programs. The CWPP works in conjunction with other County plans and programs, including, but not limited to the Natural Hazards Mitigation Plan, Rural Comprehensive Plan, Emergency Operations Plan, and Parks and Open Space Plan. These plans are briefly described below:

Lane County Natural Hazards Mitigation Plan - This plan is currently in development and is intended to assist Lane County in reducing its risk from natural hazards by identifying resources, information, partnerships, and strategies for risk reduction. The plan will meet the requirements for mitigation planning in the Disaster Mitigation Act of 2000. The CWPP will serve as the wildfire annex for the County's Natural Hazards Mitigation Plan.

Lane County Rural Comprehensive Plan - The Rural Comprehensive Plan addresses Oregon State Planning Goals and guides future growth and development in unincorporated areas of Lane County. The comprehensive plan contains a natural hazards inventory to meet the requirements of Planning Goal 7: Areas Subject to Natural Hazards. The wildfire risk assessment in the CWPP could serve as an update for the wildfire hazard inventory for Goal 7. The comprehensive plan also implements state requirements for buildings sited in forest zones.

Lane County Emergency Operations Plan – The Sheriff's Office is updating the Emergency Operations Plan until 2007. The plan currently provides a complete communication model for emergency response. The CWPP builds upon this communication model to facilitate effective coordination and response in wildfire emergencies.

Lane County Parks and Open Space Plan - Lane County manages 71 parks throughout the County. The Department of Parks and Open Space is currently revising the parks plan. The wildfire risk assessment in the CWPP will help identify the wildfire risk in or near parks and prioritize fuels reduction projects countywide.

The Lane County CWPP addresses the requirements for a community wildfire protection plan provided in Title III of the HFRA, as well as meets the guidelines and requirements of other state and federal programs. *Table 1.3* on the next page briefly describes relevant policies and how they are addressed by the CWPP.

Table 1.3: Policy Framework for Wildland-Urban Interface Fire in Oregon

Policy	Requirements	How the CWPP Addresses Policy
<p>Healthy Forests Restoration Act (HFRA): Congress adopted HFRA in 2003 to assist community, state, and federal land managers in the prevention of catastrophic wildfire on public lands through fuels reduction activities. The Act requires 50% of appropriated fuel treatment funding through HFRA is to be used in the wildland-urban interface protection zone and give priority funding to communities with a community wildfire protection plan in place.</p>	<ol style="list-style-type: none"> (1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties. (2) Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure. (3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan. (4) Three entities must mutually agree to the final contents of a CWPP: the applicable local government; the local fire departments; and the state entity responsible for forest management 	<ol style="list-style-type: none"> (1) The CWPP was collaboratively developed by a steering committee representing local, state, and federal agencies. The plan conducted outreach activities to gain input from public and private stakeholders. (2) The CWPP includes an assessment of wildfire risk in Lane County and a process for prioritizing fuel reduction projects. The plan also includes a table identifying appropriate fuel treatment methods for Lane County. (3) The CWPP recommends actions for promoting risk reduction activities on private and public lands in Lane County. (4) The Lane County Board of Commissioners, the Lane County Fire Defense Board, and the Oregon Department of Forestry approved the Lane County CWPP.
<p>National Fire Plan 10-Year Comprehensive Strategy: The National Fire Plan was developed in 2000, following a landmark wildfire season, to actively respond to severe wildfires and their impacts to communities while ensuring sufficient firefighting capacity for the future.</p>	<p>The National Fire Plan addresses five key points:</p> <ul style="list-style-type: none"> - Firefighting, - Rehabilitation, - Hazardous Fuels Reduction, - Community Assistance, and - Accountability. 	<p>The CWPP will aid in effectively implementing National Fire Plan goals by providing a collaborative framework reducing wildfire risk to communities in Lane County.</p> <p>The advisory committee responsible for coordinating the CWPP will also serve as the local coordinating body for National Fire Plan projects.</p>
<p>Disaster Mitigation Act of 2000: The Act emphasizes mitigation planning and establishes a pre-disaster hazard mitigation program.</p>	<p>Requires state and local governments to have an approved natural hazard mitigation plan in place to qualify for post-disaster Hazard Mitigation Grant Program funds.</p>	<p>The CWPP will serve as the Wildfire Annex for the Lane County Natural Hazard Mitigation Plan currently in development.</p>

Policy	Requirements	How the CWPP Addresses Policy
<p>Oregon Statewide Land Use Goal 7 Areas Subject to Natural Hazards: Goal 7 requires local governments to adopt measures in their comprehensive plan to reduce risk to people and property from natural hazards.</p>	<p>The Goal Requires local governments complete an Federal and state land managers coordinate natural hazard inventories, and local land managers alter land use designations to minimize risk to people and property from natural hazards.</p>	<p>The CWPP includes a wildfire risk assessment for Lane County, which may be used as new wildfire hazard inventory information in the Lane County Rural Comprehensive Plan.</p>
<p>Oregon Forestland Dwelling Units Statute, ORS 215.730: The statute provides criteria for approving dwellings located on lands zoned for forest and mixed agriculture/forest use.</p>	<p>The Statute directs county governments to require, as a condition of approval, that single family dwellings on lands zoned as forestland meets requirements for construction materials, fuel breaks, water supply, and location in fire protection districts.</p>	<p>The Lane County Code and Rural Comprehensive Plan currently meet requirements of the state statute for dwellings on lands zoned forestlands.</p>
<p>Oregon Forestland-Urban Interface Fire Protection Act of 1997 (Senate Bill 360): Promotes the creation of a comprehensive wildland-urban interface fire protection system in Oregon.</p>	<p>The Act contains provisions for county governing bodies to:</p> <ul style="list-style-type: none"> - Establish a forestland-urban interface classification committee - Establish a forestland-urban interface criteria and classification program - Encourage landowner forestland-urban interface fire mitigation actions 	<p>The advisory committee convened to coordinate the CWPP may also serve as the forestland-urban interface classification committee.</p> <p>The CWPP includes a risk assessment and designates a wildland-urban interface in Lane County that may be used in the criteria and classification program required by Senate Bill 360.</p> <p>The CWPP identifies actions to promote landowner education and outreach strategies for the treatment of structural ignitability.</p>

Source: ONHW/CPW, 2005

Summary

As human development continues to spread into forestlands, the risk of wildland-urban interface fire escalates. Lane County's diverse geography, population, and land ownership patterns create further challenges to reducing the county's risk of wildfire. Many entities and programs aimed at wildfire risk response, reduction, and education exist, but efforts to share resources and information are limited. The risk assessment and action plan of the Lane County CWPP create opportunities to improve collaboration, enhance wildfire mitigation efforts, and reduce the county's overall risk to wildfire.

Section Endnotes

¹ National Interagency Fire Center. 2005. <<http://www.nifc.gov>>.

² Community Service Center. 2003. *Wildfire Chapter: State of Oregon Natural Hazard Mitigation Plan. State Natural Hazard Mitigation Plan.* <<http://www.deq.state.or.us/aq/docs/neap/appendixD.pdf>>

³ Community Service Center. 2003. *Region 3: Mid/Southern Willamette Valley Hazards Assessment. State Natural Hazard Mitigation Plan.* <http://csc.uoregon.edu/PDR_website/projects/state/snhra/snha_pdf/>.

⁴ National Association of Foresters, Western Governors Association, National Association of Counties, and Society of American Foresters. 2004. *Preparing a Community Wildfire Protection Plan.* <<http://www.stateforesters.org/pubs/cwpphandbook.pdf>>.

⁵ Oregon Department of Forestry. 2001. *Northwest Oregon State Forests Management Plan: Final Plan.*

⁶ Oregon Department of Forestry. 2001. *Northwest Oregon State Forests Management Plan: Final Plan.*

⁷ Ibid.

⁸ Ibid.

⁹ State of Oregon. 2003. *Emergency Management Plan, Natural Hazards Mitigation Plan.*

¹⁰ Oregon Department of Forestry. 2001. *Northwest Oregon State Forests Management Plan: Final Plan.*

¹¹ Ballou, Brian. 2003. "A Short History of Oregon Wildfires." *Wildfire Chapter: State of Oregon Natural Hazard Mitigation Plan. State Natural Hazard Mitigation Plan*.

¹² Department of Agriculture, and the Department of the Interior. 2001. *Federal Register*, Vol. 66, Number 160.

¹³ Ibid

¹⁴ Pacific Northwest Research Station, and the USDA Forest Service. 2002. When the Forest Burns: Making Sense of Fire History West of the Cascades. *Science Findings* (46).

¹⁵ Loy, William et al. 2001. *Atlas of Oregon*.

¹⁶ Ibid

¹⁷ USDA Forest Service. 2004. *Healthy Forests Pacific Northwest – Fire & Ecosystems in the Pacific Northwest*.
<www.fs.fed.us/r6/colville/hfi/ecosystems/index.shtml>.

¹⁸ National Fire Plan. 2001. *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A 10-Year Strategy*.

¹⁹ Lane County Emergency Management. 2003. *Lane County Emergency Operations Plan, Annex B*.

Section 2

Risk Assessment

Purpose and Methods

A primary component of the Lane County CWPP is the Wildfire Risk Assessment, which assesses the potential loss of lives, property and essential infrastructure in the event of a wildland-urban interface fire. This assessment broadly identifies communities and areas within Lane County that are at risk. Information gathered through this assessment is intended to help emergency managers and fire-fighting professionals prioritize areas of concern for further analysis and mitigation activities.

The specific goals of the assessment are the following:

1. Determine the potential risk from interface fires for Lane County communities through a collaborative effort that incorporates local, on-the-ground knowledge, with the best available data and geographic analysis.
2. Establish a community base map and identify and create digital layers for the following data sets:
 - The wildland-urban interface
 - Communities at-risk
 - Risk of wildfire occurrence
 - Hazards posed by fuels, weather and topography
 - Fire protection response
 - Values (life, property and essential infrastructure) requiring protection
 - Overall interface fire risk (expressed as high, medium and low)
3. Identify areas for refined analysis, potentially through community or neighborhood level assessments.
4. Provide insight for the prioritization of hazardous fuel treatment projects.

Risk Assessment Team

Staff from Lane County Department of Public Works and Land Management Division consulted with local, state and federal land managers, fire protection personnel, and Oregon Natural Hazards Workgroup at the University of Oregon to develop the assessment.

Table 2.1: Risk Assessment Team Members

Core Assessment Team	
Brian Mladenich	Lane County Public Works GIS
Adam Vellutini	Lane County Public Works GIS
Keir Miller	Lane County Land Management
Advisory Team	
Jim Wolf	Oregon Department of Forestry
Greg Wagenblast	ODF South Cascade District
Ken Ockfen	ODF Western Lane District
Randy Wood	Lane County Fire Defense Board
Nancy Ashlock	Bureau of Land Management
Dean Vendrasco	Willamette National Forest
Cody Zook	Josephine County GIS
Andre LeDuc	Oregon Natural Hazards Workgroup

Source: Lane County Land Management Division, 2005

Assessment Structure

The assessment is organized into three sections. The first section provides an overview of the goals and objectives of the analysis and describes briefly the methods used to evaluate wildfire risks in Lane County. Detailed methodology notes are included in *Appendix C: Risk Assessment Methods*. The second section presents the findings of the risk analysis. Findings are broken into five assessment areas and displayed in a series of map panels. Communities at-risk and areas of concern within each assessment area are identified. The third section discusses data limitations and needs identified by the risk assessment team and outlines an assessment improvement and maintenance schedule.

Assessment Approach

Several communities across the nation have completed, or are currently engaged in, wildfire planning efforts. These communities developed numerous models in an attempt to understand the risks posed by wildland-urban interface fires. The assessment techniques used in these models differ widely in both content and detail of analysis. For the Lane County Wildfire Risk Assessment, the steering committee elected to follow the assessment process outlined in the guidance document, *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities*¹.

The handbook, developed through a partnership of national and regional agencies, contains recommendations and guidelines that conform closely to requirements of the Healthy Forest Restoration Act of 2003. The handbook broadly outlines an assessment framework and identifies key risk factors communities should evaluate within their plans. Under the framework, individual communities have considerable

autonomy to choose assessment methods that are appropriate to the scale of the community.

To evaluate the wildland-urban interface fire risks within Lane County, the risk assessment team adopted methods based on a model developed by the Oregon Department of Forestry entitled *Identifying and Assessment of Communities at Risk in Oregon*.² The methodology originally assessed wildfire hazards at the statewide level for use in the Oregon Natural Hazards Mitigation Plan. However, the process and data sets used in the methodology enable a tiered approach that is appropriate at several scales including county, city or neighborhood-level assessments.

How the Lane County Assessment Evaluates Risk

This assessment evaluates wildland-urban interface fire risk by analyzing four key “layers” of wildfire information. These layers are:

- **Risk:** Assesses the potential and frequency that wildfire ignitions may occur by analyzing historical ignitions over the past 10 years.
- **Hazard:** The natural conditions including vegetative fuels, weather, topographic features that may contribute to and affect the behavior of wildfire.
- **Values:** The people, property, and essential infrastructure that may suffer losses in a wildfire event.
- **Protection Capability:** The ability to plan and prepare for, as well as respond to and suppress, structural and wildland fires.

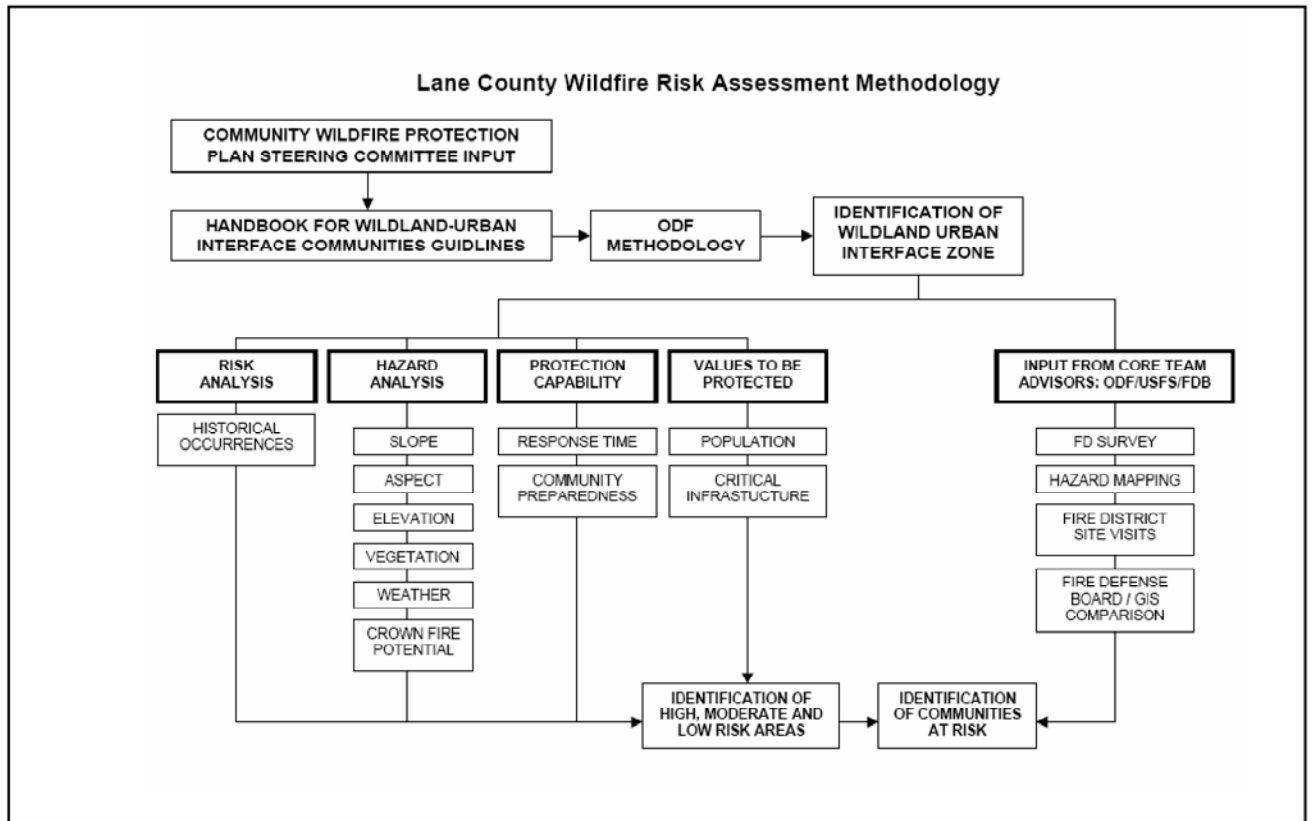
Each of these layers is developed by compiling and analyzing one or more related factors that can lead-to, aggravate, or mitigate a wildland urban-interface fire. These data layers are analyzed and displayed using a type of computer mapping software known as a Geographic Information System, or GIS.

GIS is an extremely helpful tool for evaluating wildfire risk. This assessment uses GIS to perform a number of spatial analyses and to manage, store and display wildfire information. The output of this analysis is a series of map layers, each layer displaying a separate yet interconnected piece of wildfire risk information. Through comparison and analysis of these layers this assessment indicates areas that are at a **high, moderate** and **low** potential to be impacted by a wildland urban interface fire.

In addition to GIS analysis, this assessment relies heavily on input provided by federal, state and local fire protection professionals. Local fire fighters are familiar with the threats within their protection areas. Mapping and documenting the areas at risk identified by these professionals, and comparing this information with data gathered through GIS analysis, creates a more accurate understanding of wildfire risk and provides a rough method of truth-checking GIS outputs.

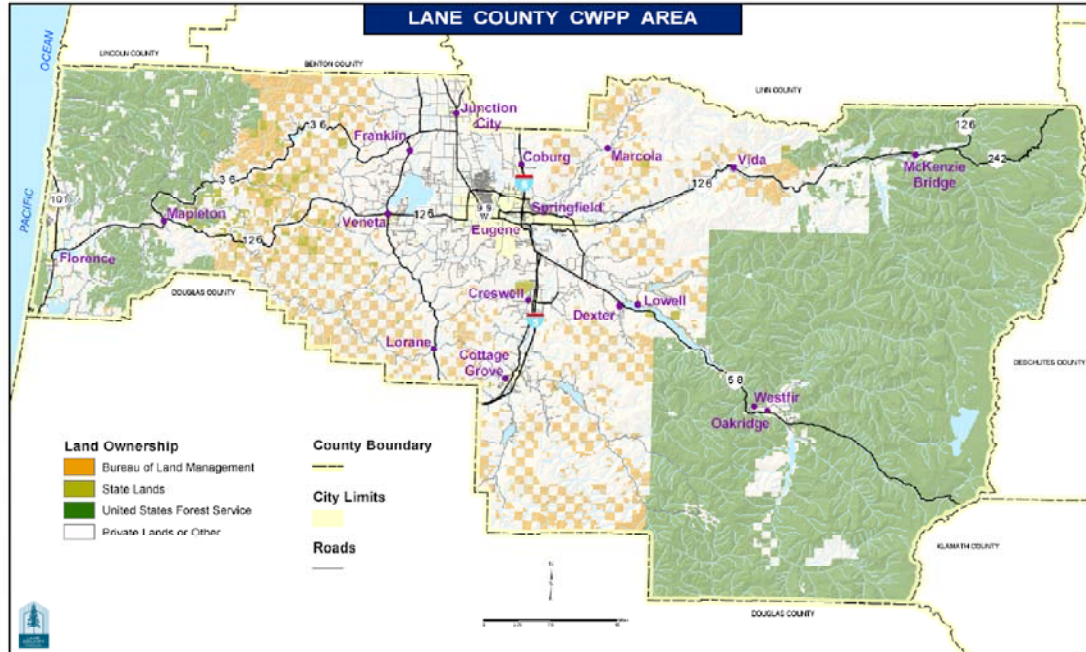
The assessment team met regularly with representatives from the Lane County Fire Defense Board, the Oregon Department of Forestry, the Bureau of Land Management, and the US Forest Service. Input and assistance from these agencies helped direct and shape the assessment process. Figure 2.1, below diagrams the process. Detailed methods and data used within the assessment can be found in Appendix C.

Figure 2.1: Lane County Wildfire Risk Assessment Methodology



Source: Lane County Land Management Division, 2005

Figure 2.2: Lane County Community Base Map



Source: Lane County Land Management Division, 2005

Assessment Findings

Wildland-Urban Interface Zone

The Lane County wildland-urban interface is large, approximately 2,269,000 acres or 3,543 square miles. It extends east to west across the county – from the Western Cascades, well up the McKenzie and Middle Fork Willamette watersheds, down through the Willamette Valley foothills and floor, across the coastal lowlands and mountains to the Pacific Ocean.

The size of Lane County’s wildland-urban interface is the result of a dispersed population in close proximity to abundant vegetative fuels. Nearly 90% of Lane County is forestland and nearly 2.5 million of the county’s 2.9 million acres are zoned F1, non-impacted forestland. The U.S. Forest Service and the Bureau of Land Management own and manage the majority of the F1 zoned property. These forestlands contain extensive fuels comprised of flammable grasses, brush, slash and timber. Excluding the population of Eugene/Springfield metro area, nearly 100,000 Lane County residents live throughout or adjacent to these forestlands. The majority of these residents live in rural population centers along the I-5 corridor and other major transportation routes, including Highways 126, 101, 58, and 36. In addition, substantial pockets of residential development exist in the Mohawk Valley, Wolf Creek, Deadwood Creek, Row River Rd, Mosby Creek Rd, Lost Creek Rd, High Prairie Rd, and the North Fork Siuslaw Rd areas.

Communities at Risk

A key output of the assessment is an understanding of the hazards that wildfires pose to Lane County communities. For the purpose of this plan, communities have been identified by their fire protection district service boundaries. Defining communities in this manner is consistent with the statewide methodology and is appropriate for an assessment of this size. However, it is important to recognize that several other communities at risk may exist within these areas. Subdivisions, neighborhoods, towns and cities may all be considered communities. The assessment helps highlight these smaller communities at risk where more refined assessments and mitigation activities should occur.

The assessment identified thirty fire protection “communities” within Lane County. Twenty-five of these communities receive structural fire protection from rural or municipal fire districts. The remaining five communities receive only wildland fire suppression from the Oregon Department of Forestry, the US Forest Service³, or in limited cases, private fire protection services on commercial forestlands. In some cases, ODF provides wildland fire protection to areas outside of existing protection boundaries through contract agreements. The risk assessment team identified these five communities as “unprotected” and assigned them place names based off of surrounding watersheds or natural features. The at-risk communities in Lane County are:

At-Risk Communities as defined by fire protection district:

- Blue River
- Coburg
- City of Eugene
- Dexter
- Eugene #1
- Goshen
- Hazeldell
- Junction City
- Lake Creek
- Lane County #1
- Lane Rural
- Lorane
- Lowell
- Mapleton
- Mohawk Valley
- McKenzie
- Pleasant Hill
- Santa Clara
- Siuslaw
- Springfield
- South Lane County
- Swisshome-Deadwood
- Upper McKenzie
- Willakenzie/Eugene
- Willakenzie/Springfield

Communities receiving wildland protection only.

- Unprotected Coast Fork Willamette
- Unprotected Long Tom / Upper Willamette
- Unprotected McKenzie
- Unprotected Middle Fork Willamette
- Unprotected Siuslaw / Coast

Risk Assessment Areas

In order to present mapped findings at a meaningful scale, the risk assessment team divided the wildland-urban interface into five assessment areas. Assessment area boundaries, though artificial, reconcile issues of scale and help reflect natural eco-regions within Lane County. These areas roughly follow watersheds, but in certain cases, expanding or altering natural watershed boundaries was necessary. The risk assessment team adjusted the boundaries to ensure that communities at risk would fall into only one assessment area. See figure 2.4, below.

The assessment areas include the following:

Area 1: Western Lane County / Coastal region

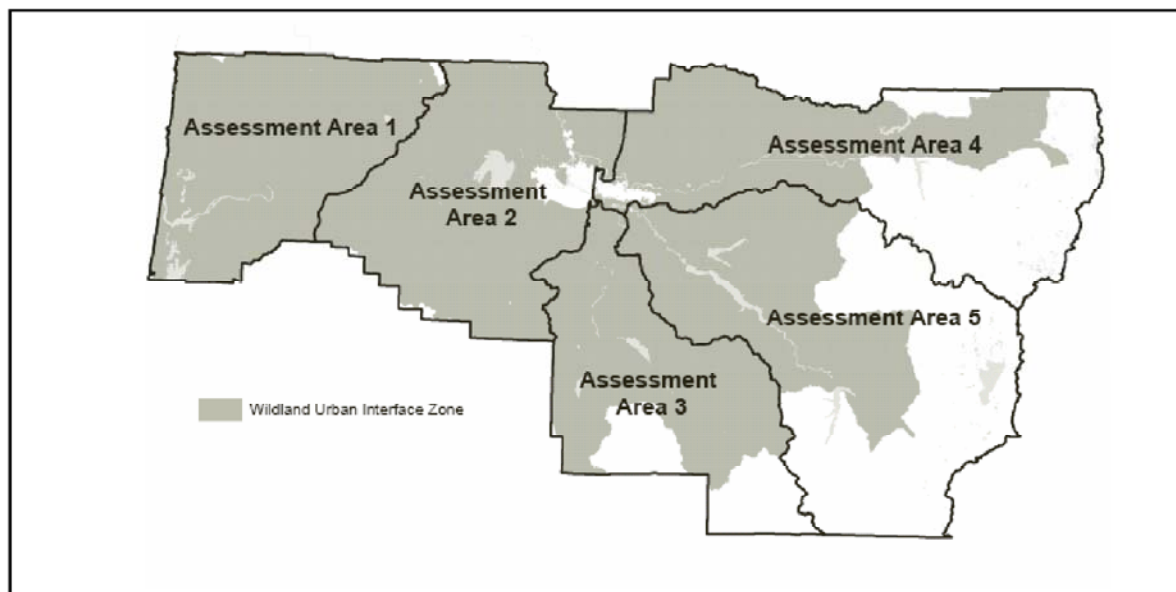
Area 2: Willamette Valley / Upper Siuslaw watershed area

Area 3: Coast Fork Willamette / Umpqua area

Area 4: McKenzie River watershed

Area 5: Middle Fork Willamette watershed

Figure 2.3: Lane County Assessment Areas Map



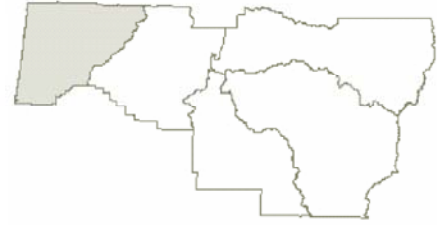
Source: Lane County Land Management Division, 2005

Assessment Panels

The following pages outline wildfire risk in each assessment area. A description of the assessment area is included along with tables that contain relevant community risk data. Finally, areas of concern identified through GIS analysis and fire protection district input are listed. Additionally, maps showing specific areas within the county that are at high, moderate or low risk are provided.

Assessment Area 1

Western Lane County / Coastal Region



Total Area: **445,226 acres**
 Area Inside WUI: **437,592 acres** (98.3%)
 Population: **15,610** (2000 census)
 Population Inside WUI:
 Number of Communities at Risk: **5**
 Incorporated Cities: **Dunes City, Florence**

Overview:

Assessment area 1 is located in western Lane County. It is comprised of portions of the Alsea, Siltcoos and Siuslaw Watersheds. Major population centers within the area include Florence, Glenada, Dunes City and Mapleton near the coast, and several smaller rural communities further inland along Highways 126 and 36. Overall WUI risks within the area are moderate to low. As the table below indicates, less than 1% of the entire area is within the high-risk category. The primary reason for this is a cool and damp coastal climate. The majority of residents within Area 1 live west of the summit of the Coast Range. Within this region the number of days per season that forest fuels are capable of producing a major fire event are significantly fewer than in other parts of the county.

Table 2. 2: Communities at Risk within Assessment Area 1

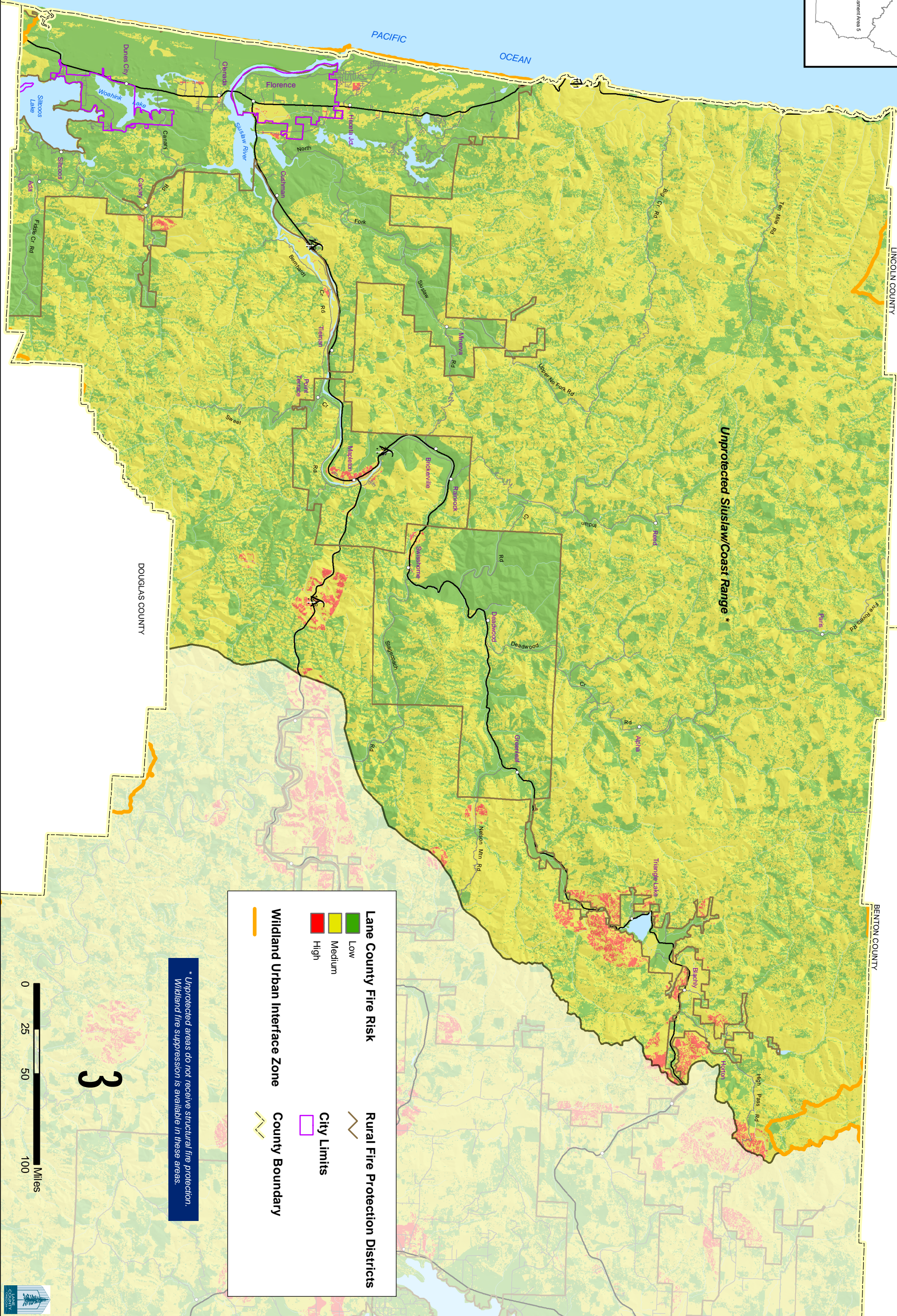
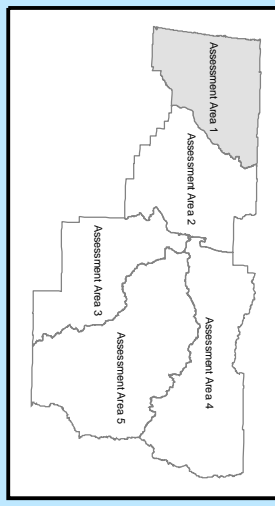
Assessment Area 1: Communities at Risk	Total Acreage	Percentage of community at risk		
		High	Moderate	Low
LCF: Lake Creek	5,005	0.48	46.09	53.43
MPF: Mapleton	13,198	1.34	45.16	53.5
SIF: Siuslaw	56,017	0.2	22.7	77.1
SDF: Swisshome-Deadwood	27,312	0.12	38.63	61.25
Unprotected Siuslaw / Coast	340,537	0.83	69.78	29.39
City of Florence	3,157	0.6	20.75	78.65

Source: Lane County Land Management Division, 2005

The following areas of concern have been identified within assessment area 1:

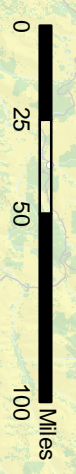
- **Deadwood Creek Area:** Deadwood Creek Rd, West Fork Rd, Steinhaur Rd
- **Triangle Lake**
- **Mapleton**
- **South of Horton:** area between High Pass Rd and Hwy 36
- **Blachly**

LANE COUNTY WILDFIRE ASSESSMENT AREA 1



	Low		Rural Fire Protection Districts
	Medium		City Limits
	High		County Boundary
	Wildland Urban Interface Zone		

* Unprotected areas do not receive structural fire protection. Wildland fire suppression is available in these areas.

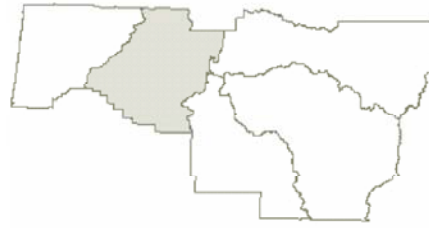


3



Assessment Area 2

Willamette Valley / Upper Siuslaw Watershed Area



Total Area: **512,966 acres**

Area Inside WUI: **486,203 acres** (94.8%)

Population: **194,019** (2000 census)

Population Inside WUI:

Number of Communities at Risk: **10**

Incorporated Cities: **Coburg, Eugene, Junction City, and Veneta**

Overview:

Assessment Area 2 is the most highly developed and populated region within Lane County. The majority of the area falls within the Willamette Valley and includes portions of the Long Tom, Main Stem Willamette and Upper Siuslaw Watersheds. The majority of residents within the area live in the Cities of Eugene, Veneta, Junction City, or Coburg. Smaller communities include Lorane, Crow, Franklin, Cheshire, Noti, Elmira, Lancaster and Alvadore. Interface fire risks within Area 2 vary greatly. Risks are low on the valley floor and moderate with interspersed high-risk zones in the remainder of the area. Higher ignition occurrences and housing densities are the primary reasons for this.

Table 2.3: Communities at Risk within Assessment Area 2

Assessment Area 2: Communities at Risk	Total Acreage	Percentage of community at risk		
		High	Moderate	Low
CBF: Coburg	23,252	0.01	10.36	89.63
EU1: Eugene #1	6,235	6.15	46.615	47.24
EUG: City of Eugene**	37,747	2.1	17.7	80.2
JCF: Junction City	42,689	0.01	14.35	85.64
LDF: Lane County #1	115,763	3.95	58	38.05
LRF: Lane Rural	38,957	0.17	25.31	74.52
LOF: Lorane	7,142	4.42	43.73	51.85
SCF: Santa Clara	3,590	0	0.39	99.61
WLE: Willakenzie / Eugene	829	0	30.78	69.22
Unprotected Long Tom / Upper Willamette	236,762	5.69	67.71	26.6

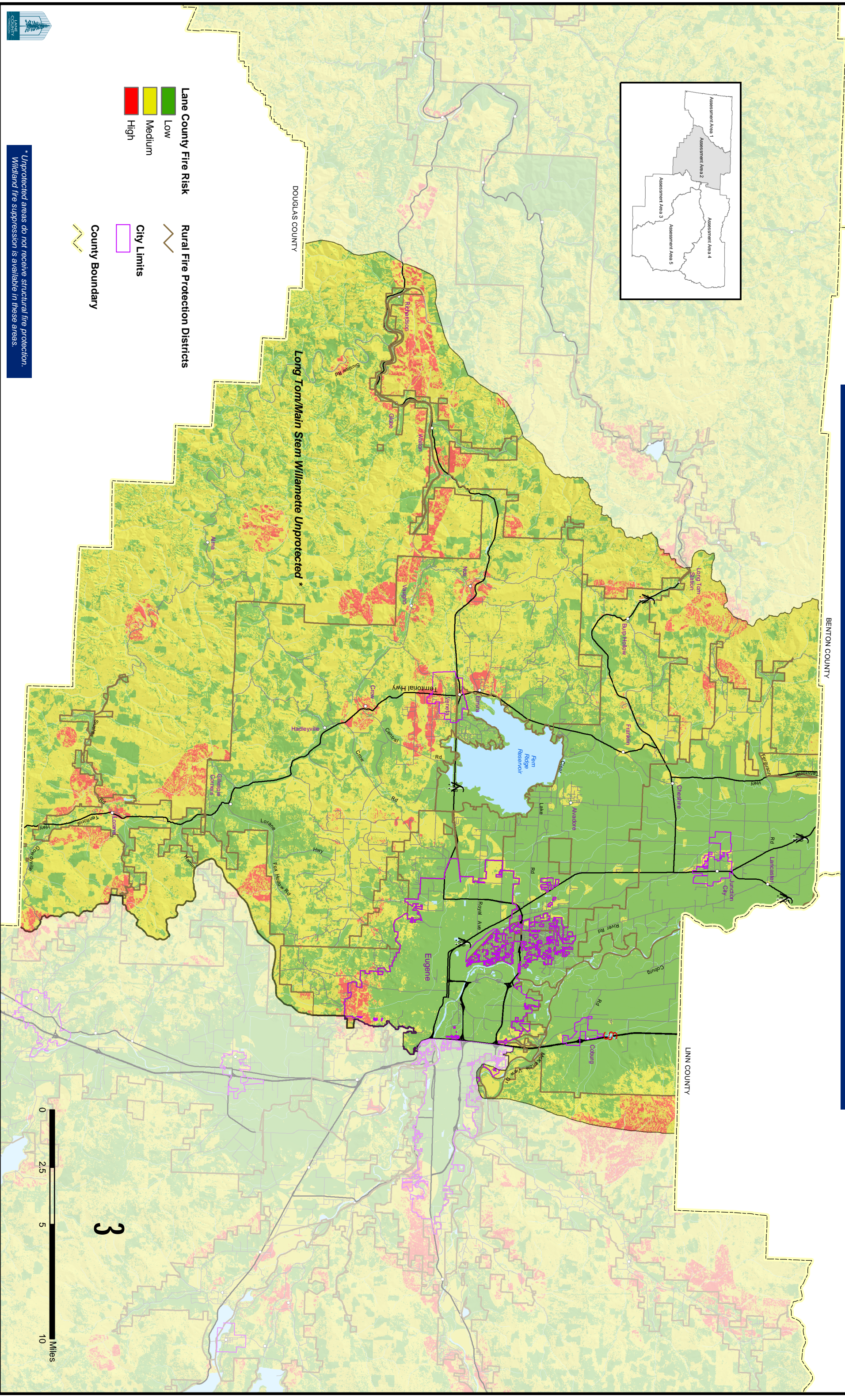
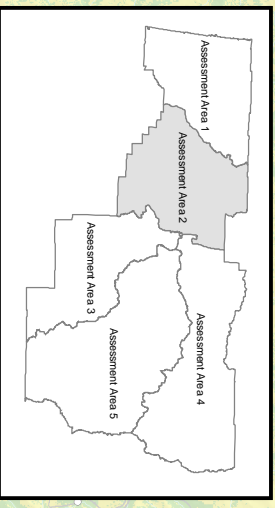
** Includes Bailey-Spencer, River Road and Zumwalt

Source: Lane County Land Management Division, 2005

The following areas of concern have been identified within assessment area 2

- **Coburg Hills:** Homes along McKenzie View Drive, Van Duyn Road and the 30 home gated community of Country View Estates
- **Cheshire:** Park Street & Turnbow Court
- **South Hills of Eugene**
- **Southwest Eugene / Spencer Creek area:** Appletree Dr, McBeth Rd, Fox Hollow Rd, Gimpl Hill Rd and South Willamette St
- **Northwest of Fern Ridge Reservoir:** Butler Rd and Lawrence Rd
- **Communities of Crow, Vaughn, Elmira, Lorane and Noti**

LANE COUNTY WILDFIRE ASSESSMENT AREA 2



- Low
 - Medium
 - High
-
- Rural Fire Protection Districts
 - City Limits
 - County Boundary

DOUGLAS COUNTY

Long Tom/Main Stem Willamette Unprotected *

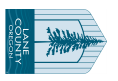
BENTON COUNTY

LINN COUNTY



3

* Unprotected areas do not receive structural fire protection. Wildland fire suppression is available in these areas.



Assessment Area 3

Coast Fork Willamette / Umpqua Area



Total Area: **464,117 acres**
 Area Inside WUI: **347,225 acres (74.8%)**
 Population: **28,310** (2000 census)
 Population Inside WUI:
 Number of Communities at Risk: **3**
 Incorporated Cities: **Creswell, Cottage Grove**

Overview:

Located in Southern Lane County, Assessment Area is comprised of portions of the Coast Fork Willamette and Umpqua Watersheds. Cottage Grove and Creswell are the major population centers in the area. Smaller Communities include Dorena, Goshen, Saginaw, London and Culp Creek. Interface risks in Area 3 are moderate to low with exceptions in the Dorena / Culp Creek and London Areas. The majority of high-risk zones within the area fall outside the boundaries of a fire protection district.

Table 2.4: Communities at Risk within Assessment Area 3

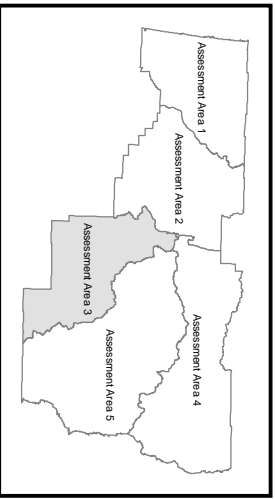
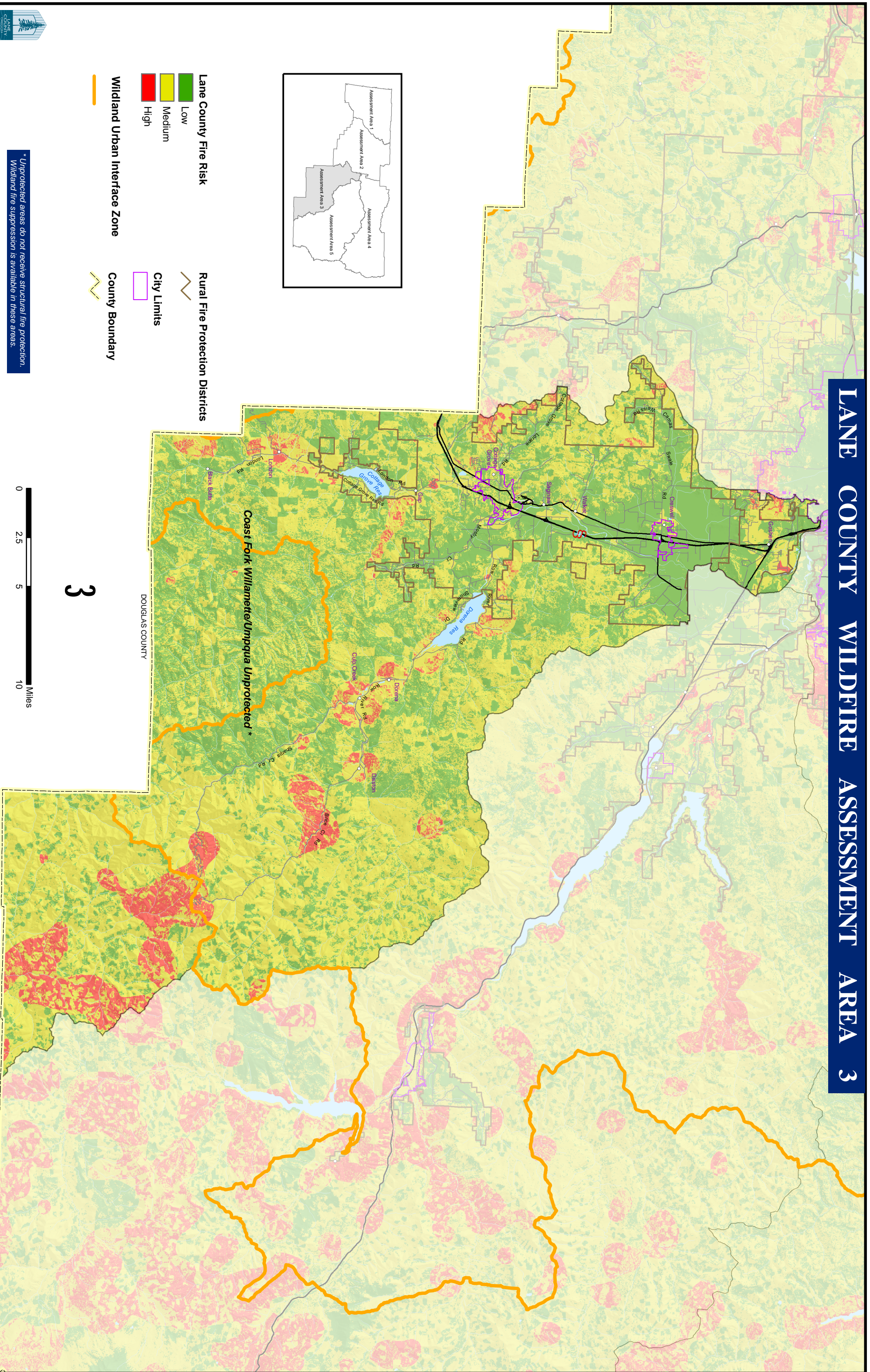
Assessment Area 3: Communities at Risk	Total Acreage	Percentage of community at risk		
		High	Moderate	Low
GOF: Goshen	8,172	3.17	38.96	57.87
SOL: South Lane County	83,490	0.38	33.81	65.81
Unprotected Coast Fork Willamette	372,455	6.5	59.72	33.78

Source: Lane County Land Management Division, 2005

The following areas of concern have been identified within assessment area 3:

- **Dillard Rd:** Beymer Rd and Skyhawk Way
- **Row River Rd. area**
- **Deerwood Dr off of Mathews Rd.**
- **SW area of Cottage Grove:** Sweet Lane, Talemna Dr
- **Turkey Hill:** Area near Rainbow Graphics just south of Creswell
- **Lynx Hollow area:** Beach Rd and Turkey Run Rd
- **Molitor Ranch Rd area:** Tree Top Drive, and residences up Molitor Hill Rd
- **Culp Creek**
- **Brice Creek Rd**
- **London**

LANE COUNTY WILDFIRE ASSESSMENT AREA 3



- Lane County Fire Risk**
- Low
 - Medium
 - High
- Rural Fire Protection Districts**
- City Limits**
- Wildland Urban Interface Zone**
- County Boundary**

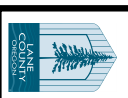
Coast Fork Willamette/Impqua Unprotected *

DOUGLAS COUNTY

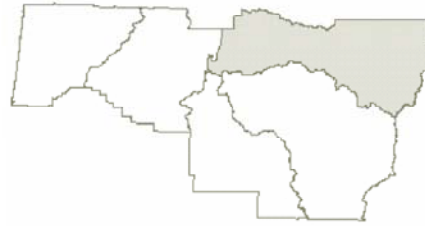


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* Unprotected areas do not receive structural fire protection. Wildland fire suppression is available in these areas.



Assessment Area 4 McKenzie River Watershed



Total Area: **678,760 acres**
 Area Inside WUI: **368,445 acres** (54.3%)
 Population: **72,110** (2000 census)
 Population Inside WUI:
 Number of Communities at Risk: **7**
 Incorporated Cities: **Springfield**

Overview:

Assessment Area 4 roughly follows the boundaries of the McKenzie Watershed. Springfield is the major urban center in the area. Several smaller communities and residential pockets are situated along Highway 126 to the east and Marcola Rd to the north. Interface fire risks are moderate to high in this area. Extensive fuels, steep slopes and the presence of significant infrastructure all contribute to the increased risk.

Table 2.5: Communities at Risk within Assessment Area 5

Assessment Area 4: Communities at Risk	Total Acreage	Percentage of community at risk		
		High	Moderate	Low
BRF: Blue River	768	9.6	36.94	53.46
MKF: McKenzie Fire	19,797	13.28	52.54	34.18
MVF: Mohawk Valley	16,844	5.75	47.83	46.42
SPR: Springfield**	9,445	3.97	15.8	80.23
UMF: Upper McKenzie	2,573	12.35	34.18	53.47
WLS: Willakenzie/Springfield	1,475	5.09	21.22	73.69
Unprotected McKenzie	627,858	8.97	64.41	26.62

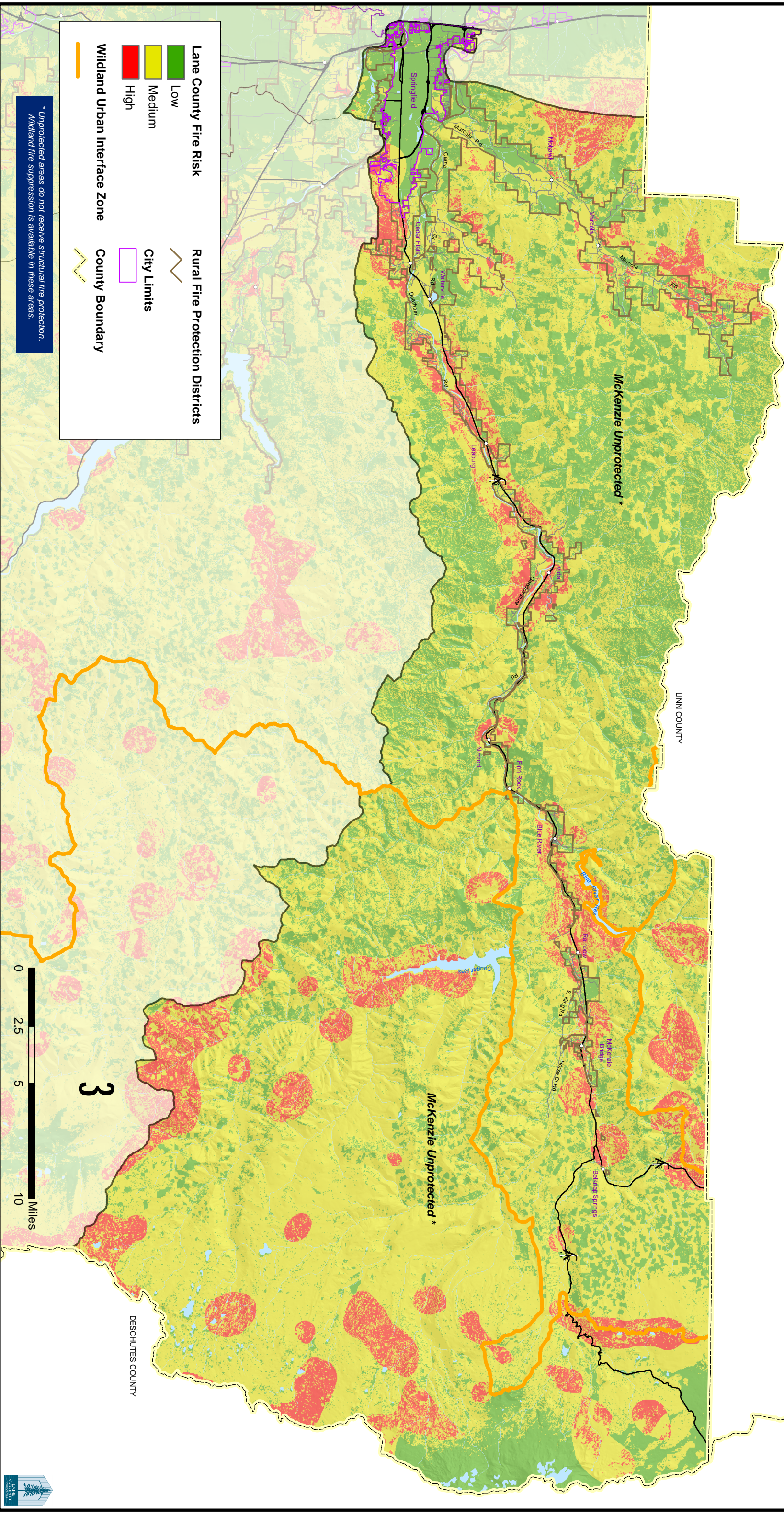
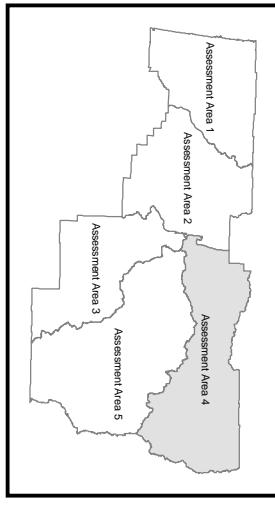
**Includes Glennwood

Source: Lane County Land Management Division, 2005

The following areas of concern have been identified within assessment area 4:

- **Blue River Area:** Elk Creek Rd near Blue River School and homes located on the hillside plateau on the Blue River / USFS boundary.
- **Camp Creek Ridge:** South-facing hill with approximately 30 homes
- **Cedar Flat and East Cedar Flat Roads**
- **North Gate Creek Rd**
- **Angel Flight Rd**
- **79th Street**
- **McKenzie Acres**
- **McKenzie View Dr**
- **Upper Mohawk Valley**
- **Thurston Hills**
- **Harbor Dr/ South 2nd Area**

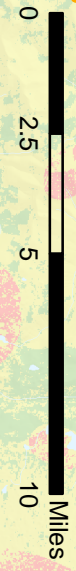
LANE COUNTY WILDFIRE ASSESSMENT AREA 4



Lane County Fire Risk		Rural Fire Protection Districts	
■ Low	■ Medium	Rural Fire Protection Districts	City Limits
■ High		County Boundary	
Wildland Urban Interface Zone		County Boundary	

* Unprotected areas do not receive structural fire protection. Wildland fire suppression is available in these areas.

3



Assessment Area 5

Middle Fork Willamette Watershed



Total Area: **812,412 acres**
 Area Inside WUI: **386,919 acres (47.6%)**
 Population: **12,910** (2000 census)
 Population Inside WUI:
 Number of Communities at Risk: **5**
 Incorporated Cities: **Lowell, Oakridge, and Westfir**

Overview

Containing nearly the entire Middle Fork Willamette Watershed, Area 5 is the largest assessment unit within Lane County. Despite its size, less than half of the total land area within the region falls inside of the wildland urban interface zone. This is because much of the area is undeveloped land within the Willamette National Forest. Developed areas include Lowell, Dexter, Westfir, Oakridge, Pleasant Hill, Fall Creek, Jasper and Trent. Wildfire risks are moderate to high with slope and vegetation hazard characteristics similar to those in Assessment Area 4. Additionally, lightning caused ignitions elevates overall risk in the southeastern portion of Area 5.

Table 2.6: Communities at Risk within Assessment Area 5

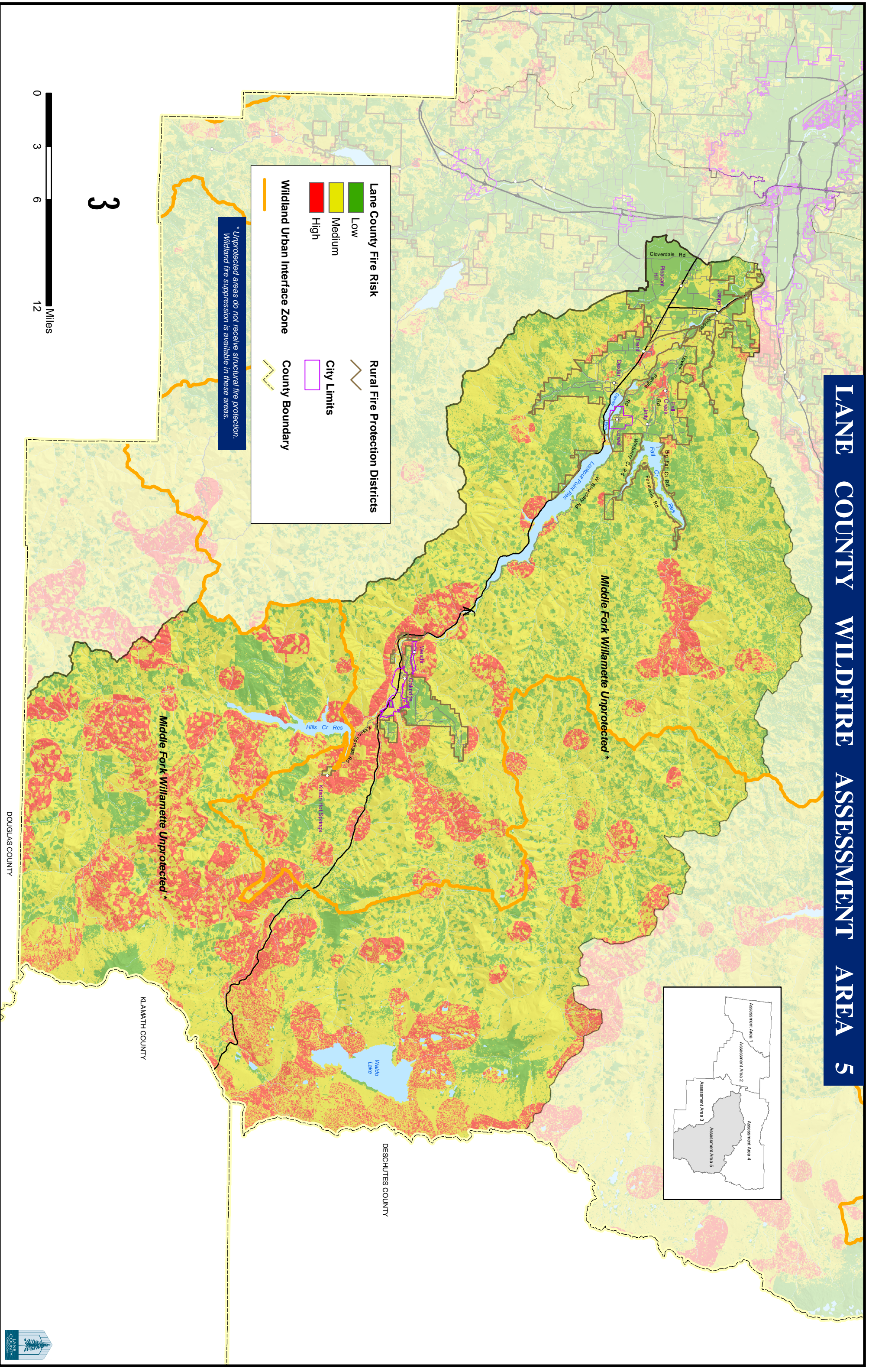
Assessment Area 5: Communities at Risk	Total Acreage	Percentage of community at risk		
		High	Moderate	Low
DEF: Dexter	10,878	3.14	45.072	51.79
HDF: Hazeldell	6,095	3.66	40.07	56.27
LWF: Lowell	12,561	4.76	41.44	53.8
PHF: Pleasant Hill	16,144	0.49	34	65.51
Unprotected Middle Fork Willamette	766,734	14.49	65.11	20.4

Source: Lane County Land Management Division, 2005

The following areas of concern have been identified within assessment area 5:

- **Dexter Area:** Carter and Minnow Creek Roads, Lost Creek Canyon, Hanna Rd
- **Oakridge / Westfir Area:** High Praire Rd / Camp six area, Bar-B L Ranch Area, Hemlock Area, North Shore Rd to Winfrey Rd and summer homes along Salt Creek.
- **Kitson Hot Springs**
- **Winberry Creek Rd**
- **Big Fall Creek and Little Fall Creek Areas**
- **Disappointment Butte (near Lowell)**
- **Papenfus Rd**
- **Hills Creek / Wallace Creek Rd Area**

LANE COUNTY WILDFIRE ASSESSMENT AREA 5



Lane County Fire Risk

- Low
- Medium
- High

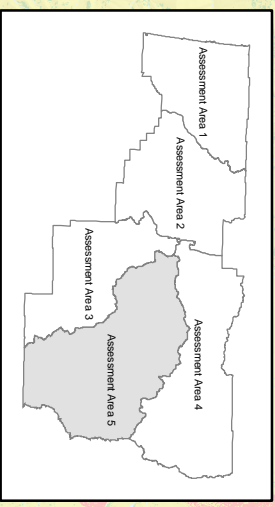
Rural Fire Protection Districts

City Limits

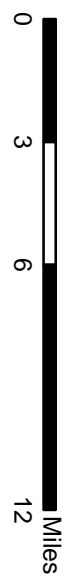
County Boundary

Wildland Urban Interface Zone

* Unprotected areas do not receive structural fire protection. Wildland fire suppression is available in these areas.



3



DOUGLAS COUNTY

KLAMATH COUNTY

DESCHUTES COUNTY



Risk Assessment Issues and Limitations

Wildland fires are complex events: their behavior and the potential damage they may cause is affected by several variables. The risk assessment team made every attempt to ensure the accuracy and completeness of the assessment. However, limitations in data and staff resources made it impossible to comprehensively assess every factor affecting wildland fires countywide. The following limitations reflect the challenges inherent in an assessment of this scale. Ideally, periodic updates and data enhancements resulting from local community assessments will address these challenges. Local community assessments can add value to the countywide wildfire plan by performing more in-depth neighborhood or parcel-level risk evaluations for areas identified as high risk by the risk assessment. These local community assessments will help further refine and update the countywide assessment.

The issues and limitations encountered include the following:

- **Difficulty identifying and analyzing specific ignition sources:** An evaluation of historic fire ignitions provided some indication of where and how frequently fires occur. However, evaluating specific sources of potential ignitions in combination with historic occurrences is likely to yield more accurate results. Due to the size of Lane County and the number of potential igniters, it is not feasible to identify and evaluate all of these sources countywide.
- **Assessing structures and their immediate surroundings:** In addition to analyzing risks, hazards, values, and protection capabilities, the risk assessment framework can also evaluate the vulnerability of individual structures. Site-specific structural vulnerability assessments that take into account building material, roof type, access, and defensible space can dramatically refine the understanding of wildfire risk. In Lane County, reliable data sets do not exist for defensible space, driveway access, or proper addressing signage. These characteristics are best identified and evaluated at the local level. The county assessor's office can provide some basic information on building material and roof type, though this information is often limited. Assessment and taxation records do not provide detailed information regarding decks, eaves, or fire-resistant roofing materials or treatments.
- **Calculation of response times:** The risk assessment team struggled with determining how quickly fire fighters can respond to structural or wildland fires. Several factors can influence response time: the condition of roads, locked gates, the availability and speed to which volunteer fire fighters can assemble and prepare to dispatch. The use of GIS analysis, average road speeds, and the location of firehouses and guard stations made it possible to come

up with a rough idea of average response times. These times are estimates and several factors limit their reliability. First, many wildland responders do not dispatch from a central location. Instead, they are assigned to patrol blocks. As the name implies, patrol blocks are large areas fire fighters tour during peak fire season. Because an exact origin of response is unknown within these areas, some averages needed to be determined. Second, there are limitations to existing data on Forest Service and private roads. GIS coverage for these roads was incomplete and does not readily match up with county road data. In addition, many of these roads are gated, have fallen into disrepair, or are not constructed to accommodate large fire fighting equipment.

- **Identification of all critical infrastructure:** To the extent possible, the risk assessment team identified and mapped important community infrastructure. Infrastructure includes: power and water facilities, schools, healthcare facilities, community centers, churches, and major manufacturing and industrial facilities. Private ownership of many of these facilities limited access to data. Security concerns made private utilities, in particular, occasionally reluctant to share data about the locations of their facilities.
- **Parcel level resolution:** The data used in the assessment has generated outputs that are coarse in scale and intended to provide meaningful results on the landscape level. The information provided in the layers has limited accuracy when viewed at a magnified scale, and should be used to broadly identify areas and communities at risk. The outputs of this assessment should not be used to determine risk at the parcel or tax lot level.

Assessment Updates

To address data limitations and to ensure that the risk assessment remains current, an interdepartmental approach to updates and maintenance is required. Lane County Emergency Management, Land Management, and Public Works GIS will share intermixed roles and responsibilities for this task. Future assessment items include short-term data enhancement actions and long-term assessment updating and revision. Additionally, mitigation project prioritization and review should include substantial core assessment team input. More information on the Risk Assessment update can be found in action items and *Section 5: Plan Maintenance and Project Prioritization*.

Summary of Key Findings

The following section presents overall findings based on the risk assessment. The overall findings are broken into four categories as is depicted in Figure 2.4.

Figure 2.4: Lane County CWPP Key Findings



Source: ONHW/CPW, 2005

Maintenance

The Lane County CWPP and its components, especially the risk assessment, require long term maintenance to continue to effectively support Lane County. Institutionalizing this long term process and assigning maintenance responsibilities to oversee long term maintenance will help ensure that the plan continues to be a functional document.

Risk Assessment

Overall, Lane County has a moderate risk to wildland-urban interface fire, but high risk areas do exist throughout the county. The risk assessment can be shared with local communities and used as a decision making tool to help prioritize fuels reduction projects. However, to ensure long term viability, the risk assessment must be updated and enhanced with more precise data from the local community level.

Community Planning

Because of Lane County's scale, the countywide risk assessment could not assess the structural ignitability of every structure located in the wildland-urban interface. Local planning efforts in small communities and neighborhoods will be able to collect more refined, site specific data required to address the structural ignitability component of the risk assessment. Local community planning efforts will be vital because as site specific data is gathered at the micro level, it can be fed back into

the countywide risk assessment. The incorporation of this refined local data into the countywide assessment will help to better provide a better picture of overall risk countywide.

Collaboration

The risk assessment draws upon a wide variety of data sources. As a result, it will be important to maintain collaborative approaches to identifying, acquiring, and utilizing data layers among data users and providers. Because of the importance that local refined data play in community planning efforts, collaboration among the county and local communities will also be important.

Risk Assessment Maps

The section below describes the risk assessment maps found on the following pages.

Map #1 – Lane County Wildland Urban Interface Zone - This map displays the boundaries of the wildland-urban interface zone within Lane County.

Map #2 – Lane County Wildfire Occurrence Risk - This map displays the level of wildfire risk across Lane County based on the historic fire occurrence: the potential and frequency that wildfire ignitions may occur by analyzing historical ignitions over the past 10 years.

Map #3 – Lane County Wildfire Hazards - This map displays the level of wildfire risk across Lane County based on natural conditions including vegetative fuels, weather, topographic features that may contribute to and affect the behavior of wildfire.

Map #4 – Lane County Community Values at Risk - This map displays the level of wildfire risk across Lane County based on housing densities and the location of critical infrastructure.

Map #5 – Lane County Protection Capability - This map displays the level of wildfire risk across Lane County based on analyzing the response times of fire response personnel and community preparedness.

Map #6 – Lane County Communities at Risk - The map displays the locations of the at-risk communities in Lane County identified by the Risk Assessment.

Map #7 - Overall Fire Risk - This map displays the level of wildfire risk across Lane County based on the combined levels of risk from the overall protection capability, wildfire risk occurrence, community values at risk, and natural wildfire hazard factors maps.

Map # 7 - Overall Fire Risk (within WUI) - This map displays the level of wildfire risk with Lane County's wildland-urban interface based on the combined levels of risk from the overall protection capability,

wildfire risk occurrence, community values at risk, and natural wildfire hazard factors maps.

¹ National Association of Foresters, Western Governors Association, National Association of Counties, and Society of American Foresters. 2004. *Preparing a Community Wildfire Protection Plan*.
<<http://www.stateforesters.org/pubs/cwpphandbook.pdf>>

² Oregon Department of Forestry. 2004. *Identifying and Assessment of Communities at Risk in Oregon*.
<<http://egov.oregon.gov/ODF/FIRE/docs/WildfireRiskAssessment.pdf>>.

³ The United States Forest Service only provides wildland fire suppression in national forests unless Mutual Aid has been requested.

Section 3

Community Outreach and Collaboration

A key element in community fire planning is the meaningful discussion it promotes among community members. The success of the Lane County CWPP is dependent on the involvement and input of a wide range of federal, state, and local stakeholders. A plan that accurately reflects the community's interests and priorities will have greater legitimacy and success in implementing the recommended actions.

The outreach strategy for the CWPP used the following three-tiered approach to engage interested parties:

- **Lane County Landowner Survey**
- **Stakeholder Interviews**
- **Firewise Workshop**

This section describes the purpose, methods, and findings for each of the three components of the outreach strategy. For a complete summary of the methods and results of each component, please see Appendices E, F, and G. The section concludes with a summary of the key findings synthesized from the Community Outreach and Collaboration strategy.

Lane County Landowner Survey

Purpose

The purpose of the landowner survey was to gain information about how rural Lane County landowners in wildland-urban interface areas perceive the potential risk of wildfire and their attitudes towards risk reduction and preparedness strategies. The survey results may be used to focus public outreach activities aimed at wildfire risk reduction and loss prevention. Additional benefits of the survey include educating and informing the public, incorporating public values into decision-making, improving the quality of decisions, and building trust in this planning process. For more information about the Landowner Survey see *Appendix E: Landowner Survey Summary*.

Methods

The survey was sent to a random sample of 1,500 rural landowners in Lane County in March 2005. The Lane Council of Governments Regional Lane Information Database served as the survey sample frame. Oregon Natural Hazards Workgroup (ONHW) at the University of Oregon received 466 valid survey responses yielding a 32% response rate.

The survey questions included five main themes:

- **Characteristics of respondents**
- **Wildland fire risk awareness and communication;**
- **Fire protection and preparedness;**
- **Reducing wildland fire risk on property; and**
- **Reducing community risk to wildfire.**

Findings

Characteristics of Respondents

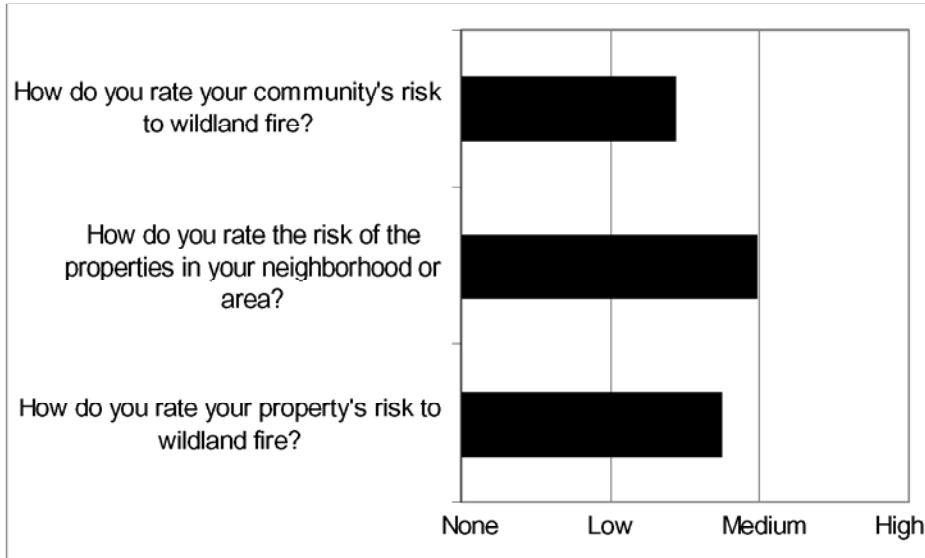
The majority of respondents owned their home (98%) and were year-round residents of Lane County (93%). Eight percent of the landowners primarily used their property for business purposes; of these respondents, 68% indicated that they used the property for agricultural and forest industries

Wildland Fire Risk Awareness and Communication

To better understand perceptions of risk, the survey included several questions about wildland fire risk on respondents' property, in their neighborhoods and around their communities. The survey also asked respondents about wildland fire communication.

Figure 3.1 shows respondents' perceptions of wildfire risk. Over half (80%) of respondents perceived their property as a medium to low risk for wildland fires. Respondents perceived their neighbors' properties to have a higher risk than their own.

Figure 3.1: Perceptions of Wildland Fire Risk (Q-1)



Source: ONHW/CPW, 2005

Personal Experience with Wildland Fire

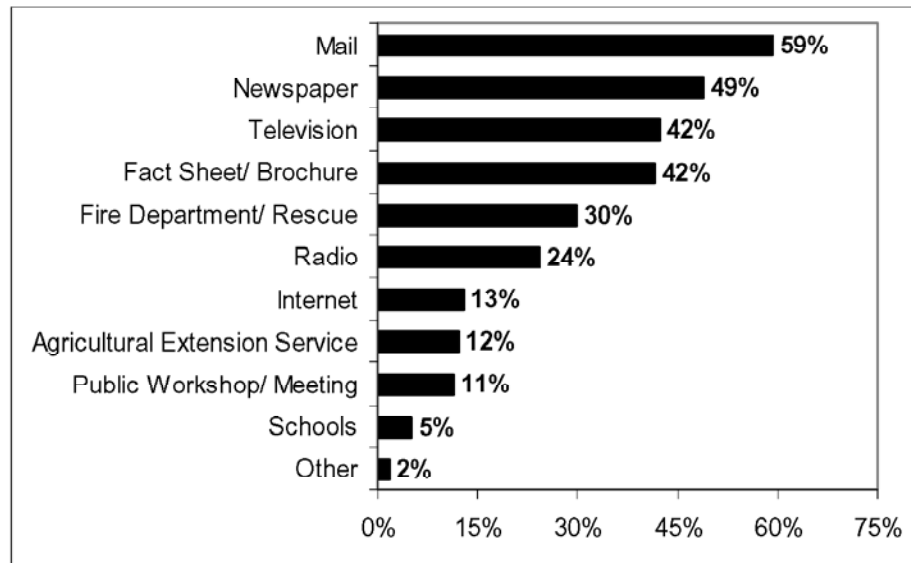
The survey asked property owners about their personal experiences with wildland fire. Forty-five percent reported that they had no previous experience with wildland fire. Just above half (57%), reported that they had witnessed a wildfire, smoke and other effects of wildfire, but few (8%) had actually evacuated their home or sustained property damage.

Sources of Information About Protecting Property

An important component of the landowner survey was gathering data on effective means of wildland fire information dispersal. The survey asked respondents how they received information about property protection in the past, as well as preferences for receiving information in the future.

Survey respondents reported that they received information from news media and local fire departments/rural fire departments. However, 27% of respondents reported that they had not received information about property protection. The survey gathered information about effective means of future correspondence relating to wildland fire property protection (Figure 3.2). Respondents identified mail, newspapers, television, and fact sheets/brochures as the top four preferred methods for receiving information. Effective means of reaching landowners in the wildland-urban interface could be a combination of these preferred methods.

Figure 3.2: Preferred Sources of Receiving Information About Protecting Property from Wildland Fire (Q-4)



Source: ONHW/CPW, 2005

Fire Protection and Preparedness

The survey gathered information about landowners' knowledge of their fire protection service providers. The survey also asked landowners about emergency preparedness, including evacuation procedures and insurance coverage. Table 3.1 shows that 70% of respondents receive fire protection services from a rural fire district. Six percent of respondents reported that they did not know if their property was protected by a fire protection service.

Table 3.1: Fire Protection Services (Q-5)

Fire Protection Service Provider	% Respondents
Rural Fire Protection District	70%
Fire Department	20%
Don't Know	6%
Not Serviced by a Fire Department or District	4%

Source: ONHW/CPW, 2005

Table 3.2 illustrates respondents' answers to questions about wildland fire preparedness. The majority (95%) of the respondents did not know or had not received information about community evacuation procedures. Sixty-six percent of respondents indicated that they did not have personal household evacuation procedures in the case of a wildland fire emergency.

One half (50%) of survey respondents reported that their insurance policies covered losses or structural damage incurred from wildland fire.

However, 43% did not know if their insurance policies would protect their properties from damages or losses from wildland fire.

Table 3.2: Wildland Fire Evacuation Procedures and Insurance Coverage (Q-6)

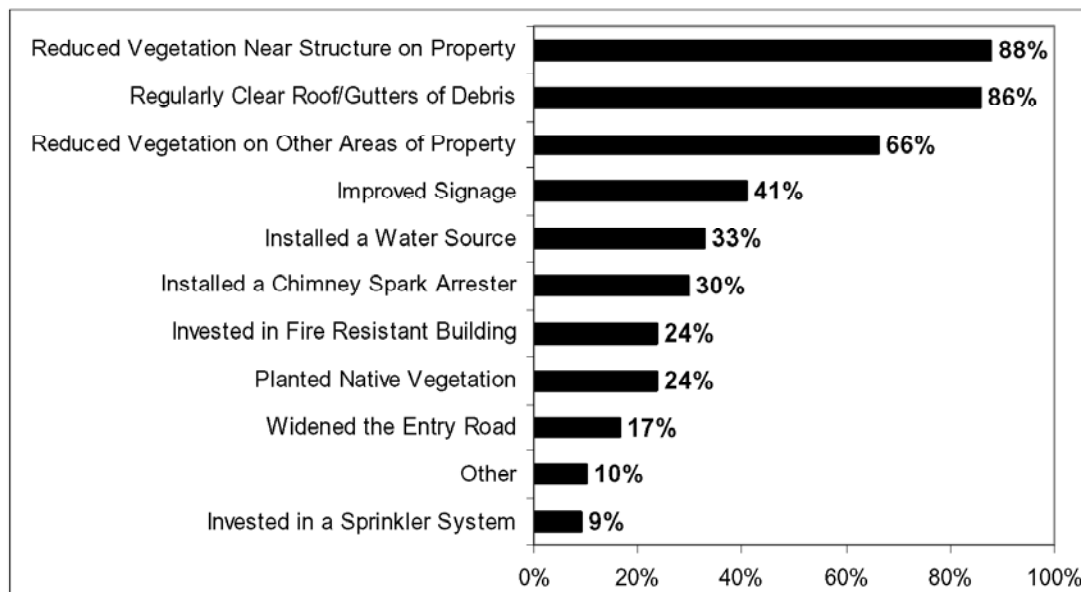
Question	Yes	No	Don't Know
Has your community informed you of their wildland fire evacuation procedures?	4.4%	90.8%	4.6%
Does your household have a wildland fire evacuation plan?	30.0%	66.0%	3.8%
Does your homeowners or business insurance policy include coverage in the event of structural damage or loss due to wildland fire?	49.9%	7.1%	42.8%

Source: ONHW/CPW, 2005

Reducing Property Risk to Wildland Fire

The survey gathered information from landowners about specific measures they have already taken to reduce the risk of wildland fire on their property. The majority (90%) of respondents indicated that they have taken measures to reduce losses associated with wildland fire. Figure 3.3 shows the types of risk reduction measures taken by respondents. The most frequently reported measures were reducing vegetation near structures and clearing roof/gutters of debris. Fewer property owners reported implementing the measures that required higher financial investment.

Figure 3.3: Actions Taken to Reduce Potential Losses from Wildland Fire (Q-7)



Source: ONHW/CPW, 2005

Preferred Risk Reduction Actions and Incentives

The survey asked landowners about their willingness to take different actions to reduce the potential impacts of wildland fire on their property. Table 3.3 shows the likelihood of respondents to take different risk reduction actions. The majority of respondents indicated that they are likely to reduce vegetation and debris (79%) and create defensible zones around structures (65%). Respondents were less likely to improve emergency access or use fire-resistant building materials.

Table 3.3: Risk Reductions Actions Most Likely to Take (Q-8)

Risk Reduction Action	Very Likely	Somewhat Likely	Not Likely
Reduce debris and vegetation on property	78.5%	15.2%	6.2%
Clear a defensible zone around the property	64.9%	25.2%	9.9%
Improve emergency access to property	35.1%	20.1%	44.8%
Use fire resistant building materials	32.8%	33.9%	33.3%

Source: ONHW/CPW, 2005

The survey asked landowners which incentives, if any, would motivate them to take additional steps to protect their properties from wildland fire (Table 3.4). The highest percentage of respondents indicated that insurance discounts (70%) or tax breaks/incentives (67%) would motivate them to implement risk reduction steps. About one-third of respondents indicated that grant programs would encourage better protection measures.

Table 3.4: Preferred Incentives to Better Protect Property (Q-9)

Type of Incentive	Percent of Respondents
Insurance Discounts	69.7%
Tax Break or Incentive	68.6%
Grant Program	29.2%
None of the Above	12.2%
Other	5.6%

Source: ONHW/CPW, 2005

Reducing Community Risk to Wildland Fire

The survey asked respondents their opinions and preferences for different strategies to reduce community risk to wildfire. Communities may take a variety of approaches to wildland fire mitigation. The questions in this section help to inform policy decisions by providing better understanding of the level of landowner support for different approaches.