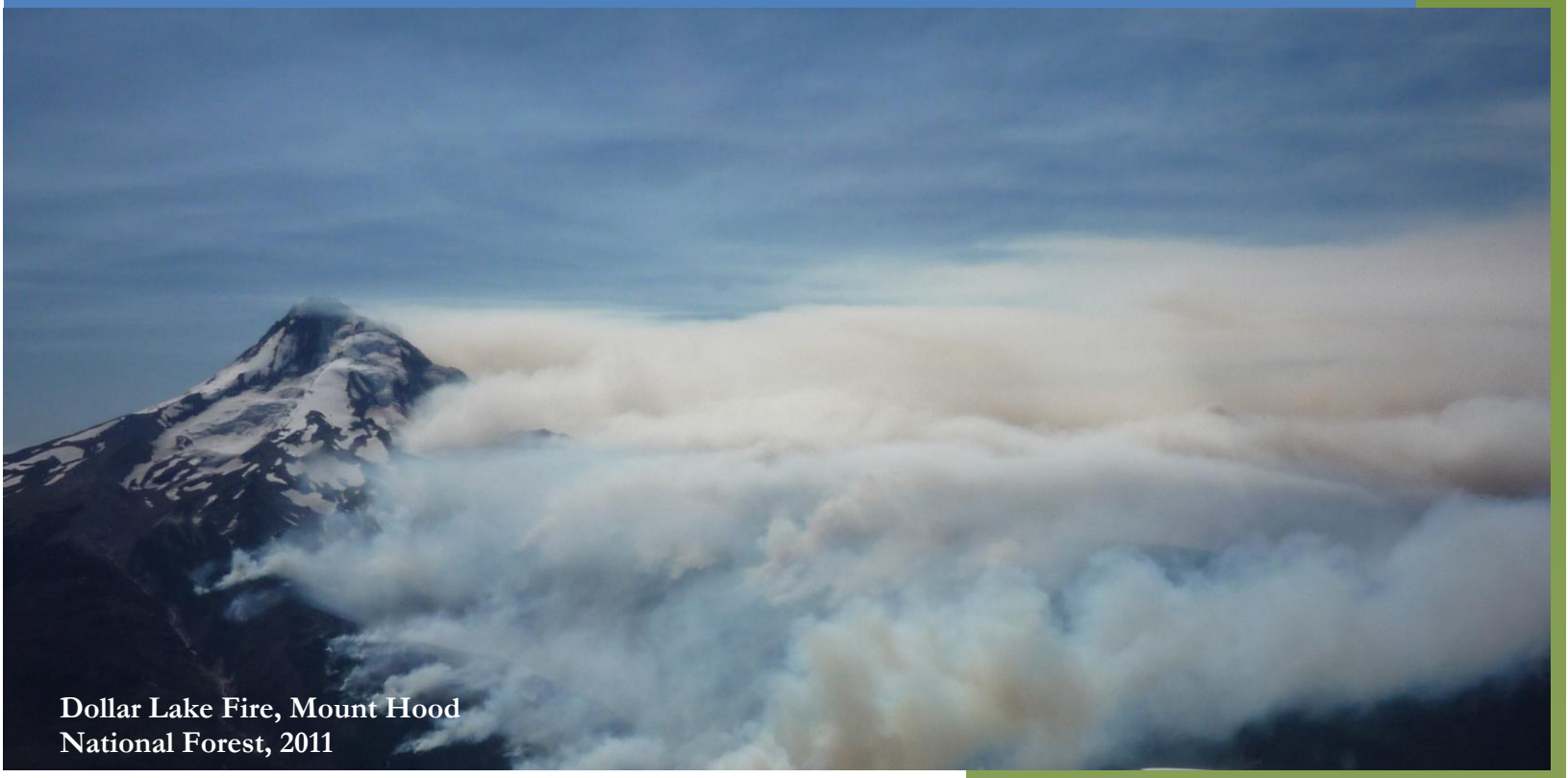
2012

Clackamas County Community Wildfire Protection Plan

Update to the 2005 Edition

Are You Prepared?



Dollar Lake Fire, Mount Hood National Forest, 2011

Prepared in coordination with Oregon Department of Forestry

August, 2012

CLACKAMAS COUNTY

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EXECUTIVE SUMMARY

Recent fires in Oregon and across the western United States have increased public awareness of the potential losses to life, property, and natural and cultural resources. In June of 2004, the Board of Clackamas County Commissioners (BCC) directed the County Departments to work with state and federal agencies, fire agencies, and community organizations to develop an integrated Community Wildfire Protection Plan. The BCC adopted this plan in 2005 in a commitment to reduce wildfire risk to citizens, the environment, and quality of life within Clackamas County. This 2012 Update was adopted in 2012 to ensure that the CCWPP remain an up-to-date and relevant document.

CCWPP Mission Statement

The mission of the Clackamas County Community Wildfire Protection Plan (CCWPP) is to provide a consolidated reference documenting wildfire hazards, prevention and response efforts, and resource-sharing information for all participating local, state, and federal fire agencies. The CCWPP improves upon historical fire planning efforts by providing a more localized and accurate approach for determining wildfire hazards and implementing best practices for wildfire protection in balance with sustainable ecological management and economic activities throughout Clackamas County.

2005-2012 CCWPP Accomplishments & Action Plan

The 2005 CWPP included an action plan to address the following focus areas: Risk Assessment, Fuels Reduction & Biomass Utilization, Emergency Operations, Education & Outreach and Structural Ignitability. The CCWPP Action Plan has been updated and revised to ensure that actions are clear, implementable and relevant (Table 1-1. 2012 CCWPP Action Plan).

The CCWPP enabled CCWPP partner agencies to be more competitive for grant funds to build capacity for implementing projects. These accomplishments are illustrated in Table 1-2. CCWPP Grant-Funded Projects 2005-2012. The total grant-funded accomplishments are as follows:

- Fuels Reduction: $1,710,968
- Education/Outreach: $982,013
- **Total Funding Generated from the CCWPP: $2.5 Million**

Fire District Coordination

The 2012 CWPP Update focused on taking a more localized approach to wildfire planning by creating individual CWPP's for each fire agency. *Chapter 10: Fire Agencies* has been expanded to include a brief description of wildfire hazards, emergency operations, structural ignitability, community outreach and education and fuels reduction priorities for each local fire agency. Local Communities at Risk were also identified. Each local CWPP is complete with an action plan to address wildfire issues specific to the community.

CCWPP Planning Process

A Wildfire Planning Executive Committee (WFPEC) guided the development of the CCWPP, identifying the primary issues to be addressed and assembling technical subcommittees to develop priorities for action. The CCWPP Action Plan includes over fifty actions that can be taken to reduce wildfire hazards and improve response efforts. The following chapters of the CCWPP document the objectives of the CCWPP and highest priority strategies for action:

CCWPP Focus Area	Priority Actions
Wildfire Risk Assessment (Chapter 4)	1.) Maintain and update the Fuels Reduction and Communities at Risk maps and databases. 2.) Continue to track structural vulnerability data throughout the County through structural triage assessments. 3.) Update the Overall Wildfire Risk Assessment as new data becomes available.
Hazardous Fuels Reduction and Biomass Utilization (Chapter 5)	1.)Develop and maintain and inventory of potential and successful FR projects by meeting with parks and natural lands managers quarterly. 2.)Continue securing funding to implement projects/ hire seasonal ODF staff. 3.) Coordinate a Fuels Reduction Project Tour.
Emergency Operations (Chapter 6)	1.) Include 12 hour operation period in FDB Fire Mutual Aid Agreement. 2.) Develop an FDB Communications Work Group. 3.) Conduct a Conflagration Exercise.
Education and Community Outreach (Chapter 7)	1.) Develop Firewise toolkit for CAR's. 2.) Create incentives for fuels reduction. 3.) Update and distribute the Burn Permitting and Fire Restrictions Brochure. 4.) Implement a Burn Barrel Program. 5.) Continue to improve address signage throughout the County.
Structural Ignitability Policies and Programs (Chapter 8)	1.) Identify a DTD representative for the WFEPC. 2.) Improve coordination with Rural Fire Agencies. 3.) Integrate WUI into Plan Map and include a public outreach strategy.

Community Involvement

The WFPEC partnered with the North Clackamas Parks and Recreation District Wildfire Management Plan team to engage the public in the 2012 CWPP Update process. A website was established to provide wildfire resources and two neighborhood workshops were conducted to educate the public about wildfire risk and provide an opportunity for citizens to give input on the 2012 CCWPP. The ODF also created the County's first Firewise Communities in Zig Zag Village and Government Camp in the Hoodland Corridor.

Sustaining Fire Plan Efforts

The Wildfire Planning Executive Committee (WFPEC) is responsible for guiding CCWPP implementation and is comprised of representatives from the Clackamas Fire Defense Board, Clackamas County, and public land management agencies. This oversight committee meets quarterly to facilitate a collaborative approach to CCWPP implementation.

CHAPTER 1: INTRODUCTION

The Board of Clackamas County Commissioners (BCC) is concerned with the risk that wildfires pose to citizens and valued forest resources. In May 2004, the BCC directed county departments to facilitate a collaborative community wildfire planning effort including local, state and federal agencies, community organizations, and individuals that have a vested interest in reducing wildfire hazard. The collaborative group identified wildfire risks, developed priorities for project funding, and developed programs to reduce the risk of wildfires to citizens and communities in Clackamas County. The first iteration of the Clackamas CWPP was adopted in 2005.

This 2012 CCWPP Update has been accomplished in accordance with the suggested 5-year update process outlined in Chapter 9: Sustaining Efforts, Monitoring and Evaluation. The update process requires staff and resources, which were made available through a 2011 Title III Grant.

CCWPP Mission, Goals and Objectives

The 2012 CCWPP Mission, Goals and Objectives remain consistent with the 2005 edition.

2005-2012 CCWPP Accomplishments & Action Plan

The 2005 CWPP included an action plan to address the following focus areas: Risk Assessment, Fuels Reduction & Biomass Utilization, Emergency Operations, Education & Outreach and Structural Ignitability. CCWPP Partners have made great progress toward implementing these actions, as shown in Table 1-1. 2012 CCWPP Action Plan. The CCWPP Action Plan has also been updated and revised to ensure that actions are clear, implementable, and relevant.

The CCWPP also enabled CCWPP partner agencies to be more competitive for grant funds to build capacity for implementing projects. These accomplishments are illustrated in Table 1-2. CCWPP Grant-Funded Projects 2005-2012. The total grant-funded accomplishments are as follows:

- Fuels Reduction: $1,710,968
- Education/Outreach: $982,013

Total Funding Generated from the CCWPP: $2.5 Million

2012 CCWPP Major Revisions

Although the 2005 CCWPP was an incredible success, the update process included a critical analysis of its effectiveness and relevance. The primary criticism of the 2005 CWPP was that fire agencies (Map 1. Clackamas Fire Agencies) did not have clear direction on actions to take within their service boundaries to reduce wildfire hazards.

Based on this guidance, the 2012 CWPP Update focused on taking a more localized approach to wildfire planning by creating individual CWPP's for each fire agency *Chapter 10: Clackamas County Fire Agencies* has been expanded to include a brief description of wildfire hazards, emergency operations, structural ignitability, community outreach and education and fuels reduction priorities for each local fire agency. Local Communities at Risk were also identified. Each CWPP is complete with an action plan to address wildfire.

Table 1-1. 2012 CCWPP Action Plan

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Risk Assessment							
1.) Maintain and Update the Fuels Reduction and Communities at Risk Maps and databases.		CC GIS	ODF, WFPEC	Annually	High	NA	New Action 2012
2.) Continue to track structural vulnerability data throughout the County through strucutral triage assessments.	a.) Work with fire districts to utilize the GPS units for obtaining home locations and structural vulnerability data.	Fire Districts, ODF	Fire Co-op	Ongoing	High	Hoodland Fire District is using the GPS units to obtain structural triage and home location data for the summer home area of the Highway 26 corridor. The Fire Co-op is housing a GPS unit that can be used by all partner agencies for collecting structural vulnerability data.	ODF has completed structural triage with home locational data for 10,000 homes in the ODF protection boundary. Hoodland completed 375 home assessments.
	b.) Provide local structural triage data and maps to all fire agencies.	Clackamas GIS	ODF	1 Year	High	NA	New Action 2012
3.) Update the Overall Wildfire Risk Assessment as new data is available.		Clackamas GIS	ODF	Long Term	High	NA	New Action 2012
4.) Utilize GPS technology to get accurate spatial and attribute data (e.g. size, access, water source volume, etc.) for fire suppression resources including.		ODF, USFS, BLM, Fire Districts	GIS	Ongoing	High	No Progress	ODF has GPS locations for all water sources. County GIS has data for some fire districts.
5.) Improve consistency in "wildland" fires ignition data.	a.) Develop a standard for reporting "wildland" and "natural cover" fires, communicate this standard to all fire districts, and promote reporting of fires.	FDB, ODF	ODF, USFS, SFMO	Long Term	Low	No Progress	The SFMO and ODF will need to come into alignment at the state level regarding categories used and consistency in reporting fires.
	b.) Research opportunities to incorporate a records management system into the Computer Aided Dispatch (CAD) system that is compatible with State Fire Marshal (SFM) Form 10 OR insert a line in the CAD database, indicating the SFM code associated with the CAD code for wildland/natural cover fires.	CCEM, SFMO	FDB	2 Year	Low	No Progress	SFMO created an online program for Fire Districts to submit fire ignition data.
6.) Work with local fire districts to develop more detailed risk assessments using local and community-derived data.		Fire Districts, ODF	GIS	Ongoing	Low	No Progress	All county fire agencies identified Communities at Risk and developed localized action plans to address risks. Maps of these areas as well as potential fuels reduction projects were provided to each fire agency.

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Fuels Reduction							
1.) Develop and maintain and inventory of potential and successful FR projects.	a.) Convene the Fuels Reduction Committee quarterly to share information.	ODF	City/County Parks & Metro	Ongoing	High	An initial listing of potential fuels reduction projects has been developed with input from fire districts and community members.	The risk assessment has been successfully used in grant applications to provide justification for fuels reduction projects.
	b.) Query all CWPP Fuels Reduction partners annually to get updates on completed and potential fuels reduction projects.	CCEM, ODF	ODF, Fire Districts, NRCS, USFS, BLM	Annually	High	No Progress	All fire agencies will be submitting priorities for communities at risk fuels reduction projects and an annual progress report will be used to keep this listing current. More coordination between Odf and Fire Districts is needed to identify willing landowners to participate.
	c.) Utilize public outreach meetings to identify willing landowners, high hazard areas, and community priorities in order to develop a prescription.	Fire Co-op, CPO's	ODF	Ongoing	High	No Progress	ODF has made presentations at the CCFFA Tree School, Home Owners Association Meetings, and Community Planning Organization Meetings to gain support for fuels reduction projects.
2.) Obtain funding to implement fuels reduction projects.		ODF,FR Committee,	ODF	Ongoing	High	ODF was awarded a Western State Fire Manager's grant to implement two model fuels reduction projects in '05.	CWPP Partners have received 1.7 million to implement fuels reduction projects on public and private land.
3.) Create an ODF Fuels Reduction Program for cost sharing opportunities designed to decrease the financial burden on the property owner.		ODF,FR Committee	Fire Districts	Ongoing	High	No Progress	ODF has received 4 WSFM grants to support a cost share program. SWCD has a cost share program for invasive species removal/ NRCS has a new forestry component in the EQIP Program.
4.) Develop a "Prescription Team" to implement projects that balance fuels reduction with habitat and ecosystem health and diversify funding sources.	a.) Engage local fire district in project planning and implementation.	ODF,FR Committee	USFS, BLM, Fire Districts, NRCS, CCFFA, OSU Ext.	Ongoing	High	No Progress	Clackamas County Parks is completing a fuels reduction project for park lands that included input from the SWCD, Metro, ODF, and consultants. ODF, the SWCD and NRCS are beginning to collaborate on projects to capitalize on the different expertise and cost share programs offered by these agencies.
	b.) Identify, opportunities for biomass utilization, and potential impacts on the community.						
5.) Develop a process to assist land owners with removing woody debris.	a.) Promote community clean-up days and utilize portable saw mills, chippers, etc. to assist land owners in removing hazardous vegetation.	ODF, Fire Districts	Fire Co-op, CCFFA	Ongoing	High	Government Camp has an annual Community Clean Up event.	Molalla Community Clean Day Spring 2006, 2007; Government Camp and Zig Zag Village Annual Community Clean Up Days
6.) Provide fire agencies and landowners with tools necessary for promoting fuels reduction as a management practice to reduce wildfire hazards and restore ecosystems.	a.) Coordinate a Fuels Reduction Project Tour to educate fire districts and natural resources managers.	ODF, OSU Extension, CCFFA	ODF	1 year	High	No Progress	ODF provides a class at Tree School to educate landowners about fuels reduction and defensible space. A Guide for fire agencies, natural resources managers and landowners is needed.
	b.) Provide landowners with a guide that can provide technical assistance in assessing and reducing wildfire hazards.	ODF,FR Committee	Fire Co-op	2 Years	High		
7.) Research partnership opportunities and strategies for adding value to extracted vegetation, and enhancing economic development.	a.) Develop an inventory of local businesses that use small diameter wood, and chips such as Estacada High School, Tillamook Forest Resources and other companies that want to purchase the fiber/raw materials. Utilize the Specialty Wood Products Website.	ODF, Clackamas County	SWCD, CCFA, OSU Ext.	Ongoing	High	Clackamas SWCD has submitted a Title III grant to identify local inventory and volumes, sort yard feasibility and market analysis and development of a business plan to recruit private investment dollars	A comprehensive Clackamas County Biomass Waste Utilization Economic Opportunity Strategy was completed in 2009.

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Fuels Reduction							
8.) Encourage Stewardship Foresters and Consulting Foresters to integrate fuels reduction into management plans and utilize cost share programs.	a.) Utilize stewardship to assist in being SB 360 compliant.	ODF	ODF	3 Years	High	No Progress (2005)	ODF Stewardship Foresters have begun integrating Fuels reduction and defensible space actions into stewardship management plans.
9.) Work with natural land managers and watershed managers to protect ecosystems and water quality in high risk natural areas and parks.	a.) Develop Bull Run Watershed forest management prescription to address heavy fuel load and high risk fire potential.	ODF, USFS, Portland Water Bureau, Sandy Fire	USFS/Sandy Fire	Ongoing	High	There is an annual meeting on the Bull Run to discuss wildfire prevention and response.	USFS, ODF, Portland Water Bureau and Portland Fire continue to have annual meetings.
	b.) Work with natural resources managers county-wide to improve forest health and resistance to wildfire in projects in critical watershed areas.	ODF	County Parks, City Parks, Metro, USFS, BLM	Ongoing	High	No Progress (2005)	The natural resources managers in the County identified fuels reduction projects in and around critical watershed areas for the 2012 Clackamas CWPP Update.
10.) Develop a map of small woodland owners (forest deferral) to identify potential project areas. Overlay harvest polygons for the past 10-15 years to show actively managed lands and those that may benefit from fuels reduction.		ODF, FR Committee	USFS, BLM, Fire Districts, NRCS, CCFFA, OSU Ext	Ongoing	Medium	Clackamas SWCD has submitted a Title III grant that will allow for consolidation of inventory volume data as well complete any data gaps.	An timber inventory volume analysis for Clackamas County was completed in 2007, but was not at a scale for identifying specific project areas.
11.) Identify opportunities to assist special needs populations in creating defensible space around homes and communities.		ODF	Social Service Agencies	Ongoing	Medium	ODF is currently using a Title III crew to assist in creating defensible space for property owners that are not able to do the work.	ODF is uses the Title III crew to assist in creating defensible space for landowners with special needs.
Completed Fuels Reduction Action Items							
Research opportunities to provide a county-wide sort yard or county-wide woody debris collection site in an effort to add value to the vegetation and enhance economic development.		SWCD, ODF	CCFFA	3 Years	High	No Progress	The Community Sort Yard feasibility analysis was completed in 2007 by Duck Creek Associates. A more comprehensive Biomass Waste Utilization Economic Opportunity Strategy was completed in 2009.

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Emergency Operations							
1.) Update the 2005 Fire Mutual Aid Agreement to include the "12 hour operational period." Include USFS as a signatory to this agreement. Continue reviewing and updating mutual aid agreements as necessary.		FDB	FDB, BIA, Multnomah County, USFS	6 Months	High	An Intracounty Mutual Aid Agreement has been adopted by FDB agencies. An intercounty mutual aid agreement is being developed. An amendment will be made to the 2005 Fire Agreement to clarify that operational periods are 12 hours.	The FDB members recall having included a 12-hour operational period to the 2005 agreement, but the documentation to support this change is missing. The FDB will complete this action. An Intra and Inter County Omnibus Agreement has been adopted.
2.) Develop a Communications Work Group to address communications needs and deficiencies.	a.) Create a list of communication needs and resources (radios, repeaters, etc.) and develop a deployment strategy that can be utilized during an event.	CC Fire Agencies, CCOM	Clackamas County	Ongoing	High	NA	New Action 2012
	b.) Identify and pursue funding sources to address communication deficiencies.	CC Fire Agencies	Clackamas County	Ongoing		No Progress	UASI and other Homeland Security grants have addressed regional communication needs, including Clackamas County. Clackamas County has implemented a reverse 9-11 system called: Clackamas County Emergency Notification System (CCENS)
3.) Provide exercises and training to build capacity for responding to wildfires.	a.) Conduct a conflagration exercise including dispatching of resources, staging, and coordination with Clackamas County Departments for potential evacuations and EOC activation.	CFOG, FDB	CC Fire Agencies	2 Years	High	A table top exercise was conducted in 2005. ODF will provided four sand tables (funded through a Western States Fire Manager's Grant) to structural fire agencies for training and fire analysis efforts.	No Progress
	b.) Clarify EOC/IMT roles and relationships.	CFOG, FDB	CC Fire Agencies	2 Years		NA	New Action 2012 Unified Command has been exercised and utilized regularly during emergencies since 2005.
	c.) Identify opportunities to provide Live Fire Training for CC Fire Agencies.	RFOG, FDB	Metro, City/County Parks	1 Year		NA	New Action 2012 NAFT is working on a Western Oregon Wildland School (to supplement Central Oregon Wildland School)
	d.) Work with RFOG to identify, develop and exercise protocol for Rural Water Supplies.	RFOG, FDB		1 Year		NA	New Action 2012
	e.) Work with natural resources managers to determine their role in responding to wildfires in parks and natural areas.					NA	New Action 2012
4.) Strengthen public education and agency coordination on evacuation procedures.	a.) Invite CCSO to FDB to discuss evacuation authority, limitation and opportunities to collaborate.	CFOG, FDB	CC Fire Agencies, Law Enforcement	Ongoing	High	No Progress	Emergency Management has an evacuation plan template and is developing an evacuation plan for Mount Hood.
	b.) Clarify roles and responsibilities for evacuation procedures based on different types of incidents (wildland, structural, Haz Mat) and ensure that all participating agencies are aware of roles.					No Progress	
5.) Develop a more efficient system for utilizing intra and intercounty resources.	a.) Work with Washington and Multnomah Counties to determine the best strategy for utilizing resources. Consider alternate dispatch run cards.	CFOG, FDB, Dispatch Centers	CC Fire Agencies	Summer 2005	High	During the July 7th, 2005 wildland exercise, the fire districts became more aware of the need to update run cards. Clackamas County FDB is participating in the RFOG group designed to enhance efficiency in utilization of resources in the Metro area.	Run cards have been updated; Unified Command is used consistently during incidents; there is a Tri-County Mutual Aid Agreement, but the group needs to develop and refine operational strategies for utilizing resources.
	b.) Consider creating structural and wildland strike teams for Clackamas County (including resources that are not in the Mob Plan).					NA	New Action 2012

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Emergency Operations							
6.) Encourage consistent application of and regular review/revision of the Open Burning Policy adopted by the Fire Defense Board.	a.) FDB Chief will work with ODF to analyze daily conditions using the Fire Severity Rating Matrix to determine open/closed burn days.	FDB Chief, ODF, CFOG	CC Fire Agencies	Ongoing	High	ODF currently provides daily analysis and forecasts to FDB Chief during fire season.	The Clackamas Fire Defense Board has improved the understanding of burning policies countywide and is wokring with ODF to determine burn days.
	b.) Continue to refine the Open Burning Policy; Develop consistent definitions for "campfires" and "designated sites."	FDB Chief, ODF, CFOG		1 Year/ Ongoing		No progress	The FDB updated the Open Burning Policy in 2010, and it should be evaluated and reviewed again in 2012-2013.
	c.) Consider using a single source website (ODF Dispatch) to update Fire Severity Rating and public use restrictions.	FDB, ODF		1 Year/ Ongoing		NA	New Action
	d.) Utilize ODF citation capabilities when CCOM is informed of an illegal burn.	FDB Chief, ODF, CFOG,		1 Year/ Ongoing		NA	New Action
7.) Develop and implement training standards for Fire Operations Center (FOC) positions.	a.) CFOG will identify classes/training specific to FOC positions and make recommendations to FDB for FOC training.	CWOG and FDB	CCEM, Public Works, RISK, Fire Districts, Law Enforcement,	2 Years /Ongoing	High	East County Fire Agencies have proposed a standard. The CWOG members would like to see the curriculum and time commitment of the ICS 300 and 400 classes before making a decision.	New Action All Fire Chiefs that staff the FOC are trained at least to theICS 300 level.
8.) Develop a consolidated document for reporting resource minimums on fire district, county-wide, and state-wide levels.	a.) The next iteration of the resource minimum document.	CWOG, FDB	CC Fire Agencies	Ongoing	Medium	The Clackamas County Fire Districts have updated the resource minimum list.	There is a resource minimum list for the County (but it does not include ODF). ODF can include theirs, but it varies throughout the year due to fire season.
	b.) ODF and USFS will provide morning resource status to the FDB via the CFOG website.						ODF uses Web EOC. USFS does not.
9.) Continue to work toward a more consistent system for credentialing wildland fire fighters by aligning DPSST and NWCG training standards.		Fire Defense Board	SFMO, PNWCG	Long-Term	Low	No Progress	The Clackamas FDB had representation on a state committee that made great headway in aligning DPSST and NWCG.
10.) Develop and implement a radio numbering system that reflects geographic area.		Radio Committee	FDB, ODF	Long Term	Low	No Progress	An attempt to do this was made in 2006, but did not generate adequate regional support. The Regional Fire Operations Group is tasked with this, although it may be a statewide issue.
11.) Encourage consistent resource typing among NIMS, NWCG,and the SFMO.	a.) FDB will provide recommendation to the State Fire Marshal's Office that the equipment and staff typing should be consistent in NIMS, NWCG, and the Mob Guide.	CWOG, FDB	CC Fire Agencies	Long Term	Low	CWOG has identified the differences in NIMS, NWCG, ODF, NFPA, and Mob Guide typing for equipment.	ODF follows the NWCG guidance for resource typing. The SFMO follows NIMS. Some progress has been made to bring NIMS and NWCG into alignment.
12.) Update the Integrated Interoperability Plan to provide a template for communications. Identify VHF and 800 MHz communications needs based on the templates.	a. Radio Committee will work with law enforcement, USFS, and other agencies to ensure interoperability when VHF template is complete.	Radio Committee, FDB	CC Fire Agencies	Sep-05	Low	VHF plan was adopted by the Clackamas District Fire Defense Board on Sept 1, 2005. Metro 800 MHZ Users group is developing a template with common terminology. 800 MHZ radios are being reflashed in Jan 2006, and all national interoperability channels will be included	Complete. The regional TICP is being updated; Bob Morrissey with Estacada Fire has survey results for radio needs.
	b.) Consider obtaining a cache of VHF and 800 MHZ radios to be used for response efforts.						The Fire Defense Board agreed to go to 800 MHZ countywide. Urban Agencies are well equipped with 800 and keep a few VHF for conflagration. Rural Agencies primarily continue to use VHF and have a few 800 MHZ for interoperability. Those Districts that need radios have included this in their Agency CWPP Action Plans.
Completed Emergency Operations Action Items							
Develop ICS training needs and a resources list for Clackamas County.	a). FDB will notify and encourage Fire Districts to use the standards developed to inventory training needs.	FDB	CCEM, Public Works, Fire Districts, Law	Ongoing	High	No Progress	Complete. Emergency Management has a current listing of needs and conducts training twice a year.
	b.) NAFT will use inventory of needs to develop/modify appropriate training schedules to bring CC Fire Districts into compliance.	FDB, NAFT	CC Fire Agencies		High	No Progress	Complete

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Education & Outreach							
1.) Develop a step by step process for outreach to Communities at Risk; including Firewise presentations.		ODF	Fire Co-op	Spring, 2012	High	New Action	Firewise presentations have been given at 15 Communities at Risk. ODF received grant funds to create 2 Firewise Communities in 2012.
2.) Develop relationships and incentives for a Fuels Reduction Program.		ODF, USFS, County/City Parks, Metro, SWCD	Fire Districts	Ongoing	High	New Action	Collectively, partners were awarded over $1 million to implement fuels reduction projects in Clackamas County; about half of which was an ODF a cost share program for removing hazardous fuels.
3.) Update the burning brochure and target areas for mailing based on the Communities at Risk.		Fire Co-op	Fire Defense Board	Spring 2014	High	New Action	Defensible Space and Debris Burning brochures were created and mailed to all WUI residents in 2006
4.) Develop and promote "Burn Barrel" program. Strengthen the relationship with the SFMO to build support for the burn barrel program.		Fire Co-op	SFMO	Spring 2013	High	New Action	The Fire Coop received a Burn barrel grant from KOG in 2007. The barrels need to be manufactured and advertised. $30 each
5.) Develop and distribute address signs for homes and potential water sites in the WUI.		Fire Co-op	Fire Districts	Ongoing	High	New Action	ODF received Title III funds to purchase and distribute address signs in the WUI.
Completed Education & Outreach Action Items							
Develop and Distribute Wildland Urban Interface Packet.	a. Include a WUI brochure detailing the Clackamas Community Wildfire Protection Plan, defensible space guidelines, and fire apparatus ingress and egress requirements. b. Include other educational materials such as a Wildfire Prevention DVD. This should be distributed to developers during the land use application process and mailed to residents in the WUI.	Fire Co-op, CC Fire Agencies	Clackamas County	March-May, 2006	Complete	Clackamas County and Oregon Department of Forestry are in the process of developing a brochure.	Complete The Fire Coop developed and distributed defensible space and debris burning brochures in 2005-2006. No DVDs were created.
Install Fire Danger Rating Boards.	a. Place the boards in strategic locations in the WUI and recreation corridors in forested lands to ensure that people are aware of fire danger. b. Utilize ODF summer crews for assembling the boards.	Fire Co-op, CC Fire Agencies	Clackamas County	March-May, 2007	Complete	ODF is researching the possibility of using adhesive labels for the boards.	Complete
Develop and Distribute Burn Permitting and Fire Restrictions Brochure.	a. Outline burn permit procedures, relevant agency contact information, Regulated Use Closure Proclamation instructions, and other restrictions associated with fire severity.	Fire Co-op, CC Fire Agencies	Clackamas County	March-May, 2008	Complete	ODF is in the process of developing a brochure.	Complete A debris burning brochure was created, but did not include Regulated Use.
Fire-Safety Messages on Safeway Grocery Bags.	a. Co-op will develop and design fire prevention graphics and messages that will be printed on paper bags at participating County Safeway grocery stores.	Fire Co-op, Safeway	Clackamas County	March-May, 2006	Complete	The Fire Coop abd Safeway have agreed to print these at no cost.	Complete

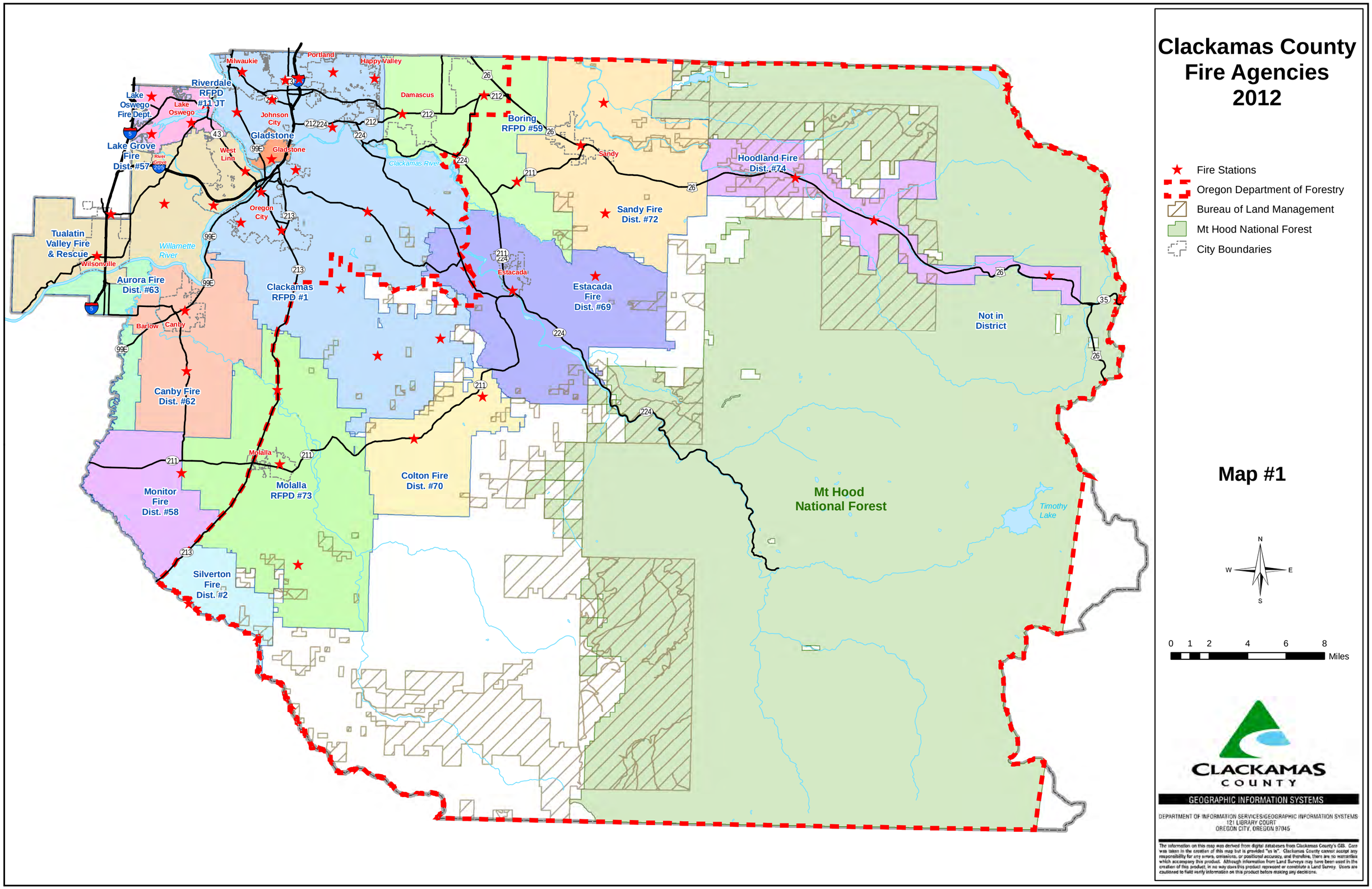
Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Structural Ignitability							
1.) Continue to enhance coordination between Clackamas Fire Districts and County DTD.	a.) Identify a DTD representative to serve on the Wildfire Planning Executive Committee.	CCEM	WFPEC	6 Months	High	DTD was heavily engaged in the CWPP process to develop and implement the Strucutral Ignitability Action Plan.	
	b.) Develop and provide a residential construction checklist to identify those projects with access and water supply challenges.	Structural Ignitability Committee	DTD	1 Year	High	The checklist is complete and will be provided by DTD during the permit application process.	This was completed and is being used, but the last checkbox cannot be used because the WUI has not been loaded into Plan Map.
	c.) Promote an open dialogue between County DTD and fire agencies by utilizing the DTD website, monthly emails, and the Velocity Hall System.	SFMO	SFMO	Ongoing	High	SFMO met with all interested fire agencies to train them on Velocity Hall	Continues to be effective in most areas. Rural Fire Districts need Velocity Hall training and are nto receiving monthly emails.
2.) Work with Clackamas County Engineering to notify Fire Districts of new buildings on existing lots that have >150 ft. driveways.		CC Building Dept.	Fire Districts	2 Years	High	Notice is being sent by the Planning Division to the fire districts for all land use applications involving a new dwelling on existing lots of record in Natural Resource Zones. All other zones are outright buildable and are not in need of land use approvals to place a dwelling. These applications are administered through the building department and fire districts are notified for structures over 3,600 square feet.	New Action 2012 Clackamas County DTD is installing a new system that could facilitate this process.
3.) Encourage use of fire-resistant construction materials, compliance with access requirements, adequate water supply, and incorporation of fuel breaks in the Wildland Urban Interface.	a.) Consider flagging the lots that are in the designated WUI and send the applicant an educational packet that includes suggestions for fire-safe construction materials, access, water supply, and fuel breaks.	County DTD	County GIS, DTD Comp. Users Group	1-2 years	High	No Progress	No Progress
	b.) Utilize Section R324 of the Residential Specialty Code "Wildfire Hazard Mitigation," which requires at least Type C roofing for homes in the WUI.	County DTD, ODF, Fire Districts	FDB	1-2 years	High	NA	New Action 2012
4.) Research incentives for improving maintenance of fire breaks and defensible space.	a.) Consider potential resources and incentives associated with SB 360 implementation.	ODF, WFPEC	Fire Co-op	Long Term	High	No Progress	No Progress
5.) Enhance structural protection in unprotected areas and comply with the Governor's policy in unprotected areas to be eligible for conflagration resources.	a.) Support ODF in working with the County Tax Assessor to change the language on property tax statements for ODF assessment from "fire protection" to ODF "non-structural fire suppression" so homeowners and insurers are	ODF, County Tax Assessor	ODF	1 Year	Medium	No Progress	No Progress
	b.) Inform homeowners in unprotected areas of their unprotected status (using mailings) and provide them with information about options for enhancing structural protection.	ODF	Fire Co-op, Adjacent Landowners	Ongoing	Medium	No Progress	No Progress
	c.) Encourage communities in unprotected areas to develop local community wildfire	ODF	Fire Coop	1 Year	Medium	Outreach and fuels reduction work around homes has been in Wapinitia.	No Progress
	d.) Research opportunity to provide disclosure of unprotected status on lots through deed restrictions.	ODF	County	1 Year	Medium	No Progress	No Progress
	e.) Consider flagging the lots that are in unprotected areas to educate the property owners about the lack of structural protection and provide options for enhancing structural protection.	County DTD	County	Complete	Complete	No Progress	The County currently requires any new lot of record to have structural fire protection.

Action Item	Details	Lead	Partners	Time	Priority	2005 Progress	2012 Progress
Structural Ignitability							
6.) Work with insurance providers to improve their criteria to adequately represent level of structural fire protection in residential structures, especially in high-risk areas.	a.) Ensure that homes in rural settings have adequate access and water supply when considering insurance eligibility; especially homes > 3,600 ft^2.	FDB, SFMO, Insurance Providers	Regional Fire Operations Group	Ongoing	Medium	No Progress	Western States Fire Chiefs are currently working with ISO to recognize reduced fire risk through prevention activates and develop incentives for promoting creation and maintenance of defensible space.
	b.) Expand criteria used by insurance providers to include fire breaks, fuels reduction, and fire prevention activities.			Ongoing	Medium	No Progress	
	c.) Provide an educational component to developers/builders regarding fire insurance considerations of homes built without adequate access and water supply.			Ongoing	Medium	No Progress	
	b.) Work with insurance providers to encourage homeowners to be proactive in maintaining fire safe vegetation and reducing hazardous fuels.			Ongoing	Medium	No Progress	
7.) Improve upon current procedures for integrating fire codes into the regulatory process.	a.) All county fire agencies should come to consensus on the minimum fire code standards they will be enforcing and gain approval from the jurisdiction in which they serve.	FDB	BCC SFMO	January '05	Low	No Progress	FDB has adopted the State Fire Marshal's Metro Code Committee Fire Applications Guide. It is currently in the process of being revised to make it more user friendly.
	b.) Continue to make improvements on the Permits Plus Program to ensure that conditions for fire code compliance are translated from land use planning to building permitting.	County DTD	County Engineering, IS	November '05	Low	No Progress	Significant improvements have been made to the Plan Map system to ensure that all input given during the land use reviews is available to building officials.

Table 1-2. CCWPP Grant Funded Projects 2005-2012

Grant	Amount $	Acres Treated	Federal Acres	Accomplishments
Oregon Dept.of Forestry				
Title III 2004	$50,000.00	0	0	Brochures created and sent to all WUI residents; 5 Community meetings with over 500 attendees; Hired Resource Innovations to assist with CWPP development
Title III 2005	$16,090.88	10	5	Fuel reduction around 15 campsites in Molalla River Corridor Demonstration of fuels reduction around home w/ television crew in conjunction with Sandy Fire. Bull Run waterhole maintenance.
Title III 2006	$70,424.48	28	13	Defensible space around 55 homes. Fuel reduction work in County park. Fuel reduction around Horse Creek Weather Station (5 acres) and at Wildwood recreation area (8 acres)
TITLE III 2007 Crew 58	$50,000.00	33.5	7	Partners - Metro, BLM, Clackamas County and one subdivision. TV spot on AM news with Fuel Reduction crew.
TITLE III 2007	$24,000.00	0	0	Prevention shelter materials for outreach at Molalla Buckaroo, Clackamas County Fair and other events that reached over 5000 people.
TITLE III 2008 Crew 58	$39,644.28	34	4	BLM, County Parks and Private Communities. Hoodland Community Center project - Showcase for material disposal. East Rolling Green Neighborhood - Cost share - ODF labor and Private Homeowners paying Chipping Costs
TITLE III 2008 South County Grant	$12,300.00	0	0	CCSWCD award - Address signs on 225 homes as demo, Sort yard (10 Tons of material) and open house at Molalla Fire Sawtell Station. Worked with County Roads on outreach for vegetation removal along road ways. Paid for fuel break
WSFM 2005 (2005-2009)	$125,000.00	104	0	Over 10,000 CWPP, Living with Fire and Burn Brochures were distributed door to door and at multiple community events. 8,200 Homes were triaged.
WSFM 2007 (2007-2011)	$280,000.00	235	0	727 homes affected by treatment, 3,500 brochures distributed, 701 landowner contacts, 12 Firewise community presentations. 1611 homes triaged, Launched the fuels reduction Cost Share Program
TITLE III 2009 CREW 58	$41,111.00	16	0	6 Sites were treated to reduce fuels on city, county and private lands.
CCSWCD 2009 Crew 58	$37,951.70	10	0	King Rd demonstration project. County Forestland Fuel Reduction project adjacent to BPA power lines.
TITLE III 2010 Crew 58	$159,564.27	39.5	21.5	Fuels reduction work completed : King Road, • Hopkins Demonstration Forest• Timberline Rim Bureau of Land Management Rim Trail, Baty Road, Camp Onahlee.
TITLE III 2010-2012	$177,219.00	0	0	6 Events at retail outlets reached approx 200 people. 12 Firewise community presentations.
TARP/WSFM 2009 (Open)	$190,000.00	260	0	Cost Share Program to reduce hazardous fuels in East Clackamas County.
WSFM 2010 (Open)	$297,745.00	100	0	Cost Share Program to reduce hazardous fuels in Clackamas and Marion Counties.
Title III 2011	$107,141.00	0	0	1,500 Address signs in areas identified through Local Fire Agencies in conjunction with the CWPP.
Title III 2011 Crew 58	$124,151.00	15	0	2 Projects - Scott Mountain and Rose Creek.
Title III 2012 Crew 58	$130,000.00	25	0	Fuels reduction crew to reduce hazardous fuels in high priority areas.
Title III 2009-2012	$134,784.00	30	0	Outreach/education, address signs, prevention materials.
Subtotal	**$2,067,126.61**	**940**	**50.5**	

Grant	Amount $	Acres Treated	Federal Acres	Accomplishments
USFS				
Title II/TIFF 2006	$90,000.00	0	15	Government Camp Hazardous Fuels Reduction. Summit Meadows and Lige Road Units. Work completed 2007. Purchased Fuels Reduction Tools for the Community
Title II 2010	$62,000.00	0	75	West Leg Rd fuels reduction/hazard tree project. Work Completed 2010.
Subtotal	**$152,000.00**	**0**	**90**	
Clackamas County/NCPRD				
Title III 2009-2010	$39,000.00	0	0	Planning and data collection and outreach within the urban rural interface areas
Title III 2010-2011	$154,000.00	89	0	Project fliers, neighborhood letters, county fair, wildfire preparedness presentations. Over 800 hrs of planning, 200 hrs of NR field work, and 800 hrs of field tech implementation.
Subtotal	**$193,000.00**	**89**	**0**	
Hoodland Fire				
Title III 2005	$125,156.00	0	0	Zigzag Summer Home Access/Egress and address signing. USFS, Hoodland FD, Clackamas County Environmental Youth Corps. Worked done during 2005 and 2006
2006 AFG	$72,479.00	0	0	Purchased Wildland and Structural Fire PPE
Title III 2007-2008	$69,018.00	0	0	Complete Summer Home area work in partnership with Wolf Tree.
Title III 2009	$4,500.00	10	0	Government Camp Clean Up Day
2006 RFA (BLM)	$9,702.00	0	0	Purchased 40 new generation fire shelters.
Subtotal	**$155,699.00**	**10**	**0**	**Total Acres Treated: 1,180**
Grand Total	**$2,567,825.61**	**1,039**	**141**	


Clackamas County
Fire Agencies
2012
Fire Stations
Oregon Department of Forestry
Bureau of Land Management
Mt Hood National Forest
City Boundaries
Map #1
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0 1 2 4 6 8
Miles
CLACKAMAS
COUNTY
GEOGRAPHIC INFORMATION SYSTEMS
DEPARTMENT OF INFORMATION SERVICES/GEOGRAPHIC INFORMATION SYSTEMS
121 LIBRARY COURT
OREGON CITY, OREGON 97045
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Portland
Milwaukie
Happy Valley
Damascus
Riverdale RFPD #11 JT
Lake Oswego Fire Dept.
Lake Oswego
Johnson City
Gladstone
Lake Grove Fire Dist. #57
West Linn
Boring RFPD #59
Sandy
Hoodland Fire Dist. #74
Clackamas River
Sandy Fire Dist. #72
Oregon City
Tualatin Valley Fire & Rescue
Wilsonville
Willamette River
Aurora Fire Dist. #63
Clackamas RFPD #1
Estacada
Estacada Fire Dist. #69
Not in District
Barlow
Canby
Canby Fire Dist. #62
Molalla
Colton Fire Dist. #70
Mt Hood National Forest
Timothy Lake
Monitor Fire Dist. #58
Molalla RFPD #73
Silverton Fire Dist. #2

CHAPTER 2: PLANNING PROCESS

Clackamas Community Wildfire Protection Plan 2012 Update Process

The 2012 Clackamas CWPP Update process was developed in collaboration with the Clackamas Fire Defense Board and the Clackamas Wildfire Executive Planning Committee. These collaborative groups evaluated the effectiveness of the plan with regard to oversight of the CWPP as well as the five focus areas: Risk Assessment, Fuels Reduction, and Emergency Operations, Education and Outreach and Structural Ignitability. The 2012 CCWPP also greatly improves upon local fire agency coordination to build capacity for plan implementation.

Wildfire Planning Executive Committee (WFPEC)

The Wildfire Planning Executive Committee was charged with oversight of the CWPP. Although the WFEPC continued to meet quarterly, the roles of the WFPEC member agencies were difficult to sustain over the last several years due to staffing and programmatic changes of partner agencies. The 2012 CCWPP Update process strengthened the WFPEC by providing more structure for meetings and creating a more realistic action plan. The WFPEC is also developing a series of bylaws for consistency in agency representation and participation.

Technical Subcommittees

Fuels Reduction and Biomass Utilization

The majority of fuels reduction projects implemented in the County have been led by the Oregon Dept. of Forestry, the North Clackamas Parks and Recreation District and the Clackamas Soil and Water Conservation District. In an effort to create a more comprehensive fuels reduction program for the 2012 CCWPP Update, City and State Parks, Metro and other natural land managers were invited to participate in the CCWPP by providing potential projects for consideration. This group has agreed to meet quarterly to share information and ideas for integrating fuels reduction strategies into natural resources management plans.

Emergency Operations

The Clackamas Fire Operations Group (CFOG) is a technical subcommittee of Clackamas District Fire Defense Board. The CFOG is responsible for coordinating fire operations issues and procedures for all fire districts in Clackamas County. The CFOG extended its membership to wildland fire agencies to address potential wildfire issues.

The CFOG has been focused on regional fire operations issues, and as such has not been meeting regularly to discuss local issues. The 2012 CCWPP Update engaged the CFOG to update the CWPP Emergency Operations Action Plan, and invigorated the group to continue meeting to address the high priority actions that need to be taken to improve wildland response efforts.

Education and Outreach

The Clackamas County Fire Prevention Cooperative (Co-op) is a consortium of structural and wildland fire agencies, and other fire prevention stakeholders. The Co-op has been successful in implementing the four highest priority actions identified in the Clackamas CWPP Action Plan (Table 1. Clackamas CWPP Action Plan 2012), and has made progress toward implementing additional actions listed in Table 7-2. Clackamas Fire Co-op Proposed CWPP Activities. The Fire Co-op meets

monthly and works collaboratively to seek grant funding to continue supporting projects identified in these action plans.

Structural Ignitability

In order to effectively reduce structural ignitability, there must be coordination and communication between fire professionals and regulatory agencies. Since 2005, a great deal of progress has been made to strengthen these relationships, which has resulted in more effective implementation of the Oregon Fire Code. The 2012 CCWPP Update process identified additional actions that will continue to enhance coordination and reduce structural ignitability.

Wildfire Risk Assessment

The Wildfire Risk Assessment was reviewed and updated by a small subcommittee comprised of representatives from County GIS, ODF and the Fire Defense Board. This group met monthly to refine the maps associated with the 2012 CCWPP Update. In an effort to be consistent with the 2005 CCWPP, maps that have been updated will retain their original numbers. The new maps that are being added to the CCWPP will continue in numerical sequence.

Table 2.1 Clackamas Community Wildfire Protection Plan Maps

CCWPP Map	Changes 2012	CCWPP Edition
Map # 1Clackamas Fire Agencies	None	2005, 2012
Map # 2 Federal Register Communities at Risk	None	2005
Map # 3 Clackamas CWPP Communities at Risk	Yes	2012
Map # 4 Wildland Urban Interface	Yes	2012
Map # 5 Wildfire Hazard	None	2005
Map # 6 Wildfire History	None	2005
Map # 7 Values Protected	None	2005
Map # 8 Protection Capabilities	None	2005
Map # 9 Overall Wildfire Risk (State)	None	2005
Map # 10 Overall Wildfire Risk (County)	None	2005
Map # 11 Fuels Reduction Projects	Yes	2012
Map # 12 Summer Home Inventory	None	2005
Map # 13 Communities at Risk & Fuels Reduction Projects	New Map	2012
Map # 14 Structural Triage & Home Assessments	New Map	2012
Map # 15 Aurora Fire	New Map	2012
Map # 16 Boring Fire	New Map	2012
Map # 17 Canby Fire	New Map	2012
Map # 18 Clackamas Fire	New Map	2012
Map # 19 Colton Fire	New Map	2012
Map # 20 Estacada Fire	New Map	2012
Map # 21 Gladstone Fire	New Map	2012
Map # 22 Hoodland Fire	New Map	2012
Map # 23 Lake Oswego Fire	New Map	2012
Map # 24 Molalla Fire	New Map	2012
Map # 25 Monitor Fire	New Map	2012
Map # 26 Sandy Fire	New Map	2012
Map # 27 Silverton Fire	New Map	2012
Map # 28 Tualatin Valley Fire and Rescue	New Map	2012
Map # 29 Wildland and Unprotected Areas	New Map	2012

Fire Agency Coordination

Each fire agency (including ODF and USFS) was interviewed during the 2012 CCWPP process to receive feedback on countywide wildfire issues, assess local wildfire hazards, identify local Communities at Risk, and develop a series of action items to guide local wildfire prevention and response efforts. These interviews resulted in individual CWPP's for each fire agency.

Public Outreach Process

The WFPEC partnered with the North Clackamas Parks and Recreation District Wildfire Management Plan team to engage the public in the 2012 CWPP Update process. A website was established to provide wildfire resources and two neighborhood workshops were conducted to educate the public about wildfire risk and provide an opportunity for citizens to give input on the 2012 CCWPP.

Firewise Communities: Zig Zag Village &Government Camp

The National Fire Protection Agency's Firewise Communities/USA Recognition Program encourages and acknowledges citizen action to reduce wildfire risk. ODF received Title III funding to promote the Firewise Communities/USA Program, with the goal of creating certified communities in high priority Communities at Risk.

Zig Zag Village and Government Camp have been identified as local Communities at Risk (CAR) by the Hoodland Fire District. These proactive communities are aware of the risk of wildfire and are taking steps to mitigate this risk by participating in the National Firewise Recognition Program. These communities are located along Highway 26 and are bordered by the Mount Hood National Forest.

The Zig Zag Home Owners Association and Government Camp Community Planning Organization worked with the ODF, Hoodland Fire District and the USFS to assess wildfire hazards throughout the community and develop strategies to mitigate them. They also held Firewise Community Clean-Up Days to begin implementing the Firewise recommendations for becoming more wildfire resilient communities. Participation in the Firewise Communities/USA Program is an ongoing process of community commitment to wildfire safety.ODF and Hoodland Fire will continue working with Zig Zag Village and Government Camp to reduce wildfire hazards and retain Firewise/USA certification. For more information, please see *Chapter 10.8 Hoodland Rural Fire Protection District #74 CWPP*.

CHAPTER 3: FOREST CONDITIONS & WILDFIRE HISTORY

History of Wildfire in Clackamas County (since 2005)

Clackamas County has escaped the recent large fire occurrences of other western Oregon counties. However, weather, fuels buildup, and climatic changes have provided conditions conducive for a large fire event. Residential development in Clackamas County is heavily interwoven with forest land, so a relatively small fire of only a few hundred acres would pose a significant risk to many residents and their homes. Oregon Department of Forestry places the number of homes on forest land within ODF's boundary in Clackamas County at over 11,000.

Since 2005, there have been eight significant fires on USFS land in or affecting Clackamas County (Table 3.1). The majority of these had a wildland urban interface component, triggering voluntary and/or mandatory evacuations.

Table 3.1. Significant USFS Fires in the Clackamas County Area 2005-2012

Year	Name	Acres	Cause	Area
2011	Mother Lode	2,700	Lightning	Bull of the Woods Wilderness
2011	Nasty Fire	< 100	Lightning	Opal Creek Wilderness
2011	Dollar Lake	5,000	Lightning	Mount Hood
2010	View lake	2,900	Lightning	Ollalie Lake/ Bull of the Woods
2009	Microwave	2,100	Lightning	Mosier/Hood River
2008	Lake Lenore	450	Lightning	Bull of the Woods Wilderness
2008	Ruddy	47	Lightning	Ollalie Lake
2006	Blister	790	Lightning	North of Bagby Hot Springs
Total USFS Acres Burned		16,187		

ODF North Cascade District Fire Ignitions

In addition to the USFS fires reported below, ODF responded to a total of 582 wildfire ignitions since 2005, burning over 640 acres. These fires were controlled during initial attack, and thus did not result in significant loses. However, the number of ignitions underscores potential for a large scale wildland urban interface fire in the ODF protection boundary. Causes of these fires are tracked to assist in directing public outreach and prevention efforts:

- Debris Burning: 250
- Equipment Use: 98
- Miscellaneous: 69
- Arson: 36
- Smoking: 20
- Lightning: 16
- Railroad: 1

Total ODF Ignitions: 582

Forest Conditions

There have been no significant changes to forest conditions since 2005. The majority of forest lands in Clackamas County have a Moderate to High Severity Fire Regime in Condition Class 1.

CHAPTER 4: WILDFIRE RISK ASSESSMENT

One of the core elements of the Clackamas Community Wildfire Protection Plan is developing an understanding of the risk and potential losses to life, property, and natural resources during a wildfire in order to identify and implement the most effective strategies for preventing losses from fire, while allowing natural fires to take their course in shaping a more healthy and sustainable forest.

Risk Assessment Objectives

I. Develop and conduct a wildfire risk assessment to accurately portray vulnerable populations, property, and infrastructure.

II. Utilize fire district boundaries to identify Communities-at-Risk (CARs), and encourage the identification of more detailed CARs during local planning processes

III. Identify wildland-urban interface and forest-urban interface areas consistent with the state methodology and appropriate for future SB 360 development.

IV. Coordinate with fire districts to determine risk level of highly vulnerable and/or unprotected areas.

V. Develop a risk assessment at a level detailed enough to use in prioritizing fuels treatment and other fire prevention projects, but broad enough to encompass entire county.

VI. Develop a risk assessment that can be adapted to reflect changing forest conditions.

VII. Develop an appropriate point distribution system for risk assessment (protection capability, structural vulnerability, values, etc.) consistent with fire district priorities.

VIII. Utilize state, county, and local data to create a seamless risk assessment that can be used as a foundation for fire districts can build their own more localized risk assessments for their community fire plans.

Risk Assessment Accomplishments

The primary Risk Assessment Actions on which progress has been include:

1.) Improved the understanding of local wildfire risks.

- ✓ Local Communities at Risk Map (Map #3)
- ✓ Refined Wildland Urban Interface Map (Map#4)

2.) Improved structural ignitability data.

- ✓ Structural triage GPS units were used to create structural ignitability dataset (Map #14).

Risk Assessment Actions

The Risk Assessment Action Plan has been updated since 2005 to reflect accomplishments and ensure that the action plan remains relevant to current issues (Table 1-1.2012 CCWPP Action Plan). The high priority risk assessment actions to be addressed by the wildfire planning team will be to:

1) Maintain and Update the Fuels Reduction and Communities at Risk Maps and databases.
2) Continue to track structural vulnerability data throughout the County through structural triage assessments.
3) Update the Overall Wildfire Risk Assessment as new data becomes available.

Communities at Risk

Different scales of CAR's are necessary to direct large-scale State and Federal planning efforts as well as local outreach projects. For a listing of Federal and State CAR's, please see the 2005 CCWPP. The Clackamas CWPP addresses wildfire hazards county-wide (not just those areas in close proximity to state or federal lands) and as such, identified each local fire district or department as individual Communities at Risk.

Local Communities at Risk/ Strategic Planning Areas

CCWPP partners also recognize that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as Local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map # 3 CCWPP Communities at Risk and listed in Table 4-1. Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach/awareness
- Communication issues

Table 4-1. Local Communities at Risk in Clackamas County

Fire Agency	Priority	Community At Risk
Aurora Fire	High	Whiskey Hill
Aurora Fire	High	Eilers
Aurora Fire	High	Butteville
Boring Fire	High	Damascus Lava Domes
Boring Fire	High	Donna Court
Boring Fire	High	Hwy 224 Corridor
Boring Fire	High	Bartell Road
Boring Fire	High	Gold, Bronze, Nickel
Boring Fire	High	Mountain View
Boring Fire	Med	Amisigger Road
Boring Fire	Med	Tickle Creek
Boring Fire	Low	Eagle Fern Park
Canby Fire	High	Adkins Circle
Canby Fire	High	Sundowner
Canby Fire	Med	Public Works
Canby Fire	Med	Dutch Vista
Canby Fire	Med	N Side Molalla River
Canby Fire	Low	River Park
Canby Fire	Low	South End
Clackamas Fire	High	Canemah
Clackamas Fire	High	Mt Talbert
Clackamas Fire	High	Scouters Mountain
Clackamas Fire	High	Redland Area
Clackamas Fire	High	Beaver Lake
Clackamas Fire	High	Clarkes
Clackamas Fire	High	Leisure Woods
Clackamas Fire	Med	Holcomb
Clackamas Fire	Med	Three Creeks
Clackamas Fire	Med	Dianne/Shelly
Colton Fire	High	Boomer Springs
Colton Fire	High	Walton Road
Colton Fire	High	Deardorff Road
Colton Fire	Med	Elwood
Colton Fire	Med	Hunter Road
Colton Fire	Med	Holt
Colton Fire	Med	Dhooghe Road
Colton Fire	Med	Fernwood Road
Estacada Fire	High	Paradise Park
Estacada Fire	High	George
Estacada Fire	High	Garfield/Porter
Estacada Fire	High	Dodge Hillockburn
Estacada Fire	Med	Viola
Estacada Fire	Med	Ranger Woods
Estacada Fire	Med	McIver State Park
Estacada Fire	Med	Metzler Park
Estacada Fire	Low	Silver Fox RV Park

Fire Agency	Priority	Community At Risk
Gladstone Fire	High	Parkway Woods
Gladstone Fire	High	Billy Goat Island
Gladstone Fire	High	Dahl Beach
Gladstone Fire	Med	Risley Wetlands
Gladstone Fire	Low	Meldrum Bar
Hoodland Fire	High	Marmot Road
Hoodland Fire	High	Government Camp
Hoodland Fire	High	Summer Homes
Hoodland Fire	High	Rhododendron
Hoodland Fire	High	Lolo Pass
Hoodland Fire	High	Cherryville-Alder Creek
Hoodland Fire	Med	Trillium Lake
Hoodland Fire	Med	Welches-Wemme
Hoodland Fire	Med	Timberline Rim
Hoodland Fire	Med	Sleepy HolLow
Hoodland Fire	Med	Brightwood
Hoodland Fire	Med	Wildwood
Lake Oswego Fire	High	Iron Mountain
Lake Oswego Fire	High	Palisades
Lake Oswego Fire	High	Cooks Butte
Lake Oswego Fire	Med	Mountain Park Area
Lake Oswego Fire	Med	Tryon Creek
Lake Oswego Fire	Low	Waluga Park
Lake Oswego Fire	Low	Springbrook Park
Molalla Fire	High	Alder Creek
Molalla Fire	High	Rosewood
Molalla Fire	High	Sawtell
Molalla Fire	Med	Molalla Heights
Molalla Fire	Med	Fernwood Area
Molalla Fire	Med	Dickey Prairie
Molalla Fire	Low	Big Rock
Molalla Fire	Low	Salo Area
Molalla Fire	Low	Blue Road
ODF	High	Sawtell, Cooper Road
ODF	High	Elk Prairie & Family Camp
ODF	High	East Highland
ODF	Med	Butte Creek Unprotected
ODF	Med	Lais Rd & North Fork Rd
ODF	Med	Ramsby Rd Unprotected
ODF	Med	Lower Highland & Ridge
ODF	Med	Wapanitia
Sandy Fire	High	Cedar Creek
Sandy Fire	High	Firwood
Sandy Fire	High	Wildcat Mountain
Sandy Fire	Med	Bull Run
Sandy Fire	Med	Bluff Road

Table 4.1. Local Communities at Risk in Clackamas County *(continued)*

Fire Agency	Priority	Community At Risk
Silverton Fire	High	Maple Grove
Silverton Fire	High	Boy Scout Camp
Silverton Fire	High	Butte Creek Rd
Silverton Fire	Med	S Wildcat
Silverton Fire	Med	Meadow Ct/Marquam
Silverton Fire	Low	Prospect
Silverton Fire	Low	Groshong Rd
TVF&R	High	Skye Parkway Area
TVF&R	High	Wilderness Park
TVF&R	High	I 205 Corridor
TVF&R	High	Ladd Hill Area
TVF&R	Med	Prosperity Park
TVF&R	Med	Palomino Loop
TVF&R	Med	Rosemont
TVF&R	Med	Wisteria
TVF&R	Med	Frobase
TVF&R	Med	Wheatland
TVF&R	Med	Frogpond
TVF&R	Med	Pete's Mountain Area
USFS	High	Ripplebrook
USFS	Med	Joe Graham
USFS	Med	Timberlake
USFS	Med	Three Lynx

Wildland Urban Interface (Map #4)

The CCWPP risk assessment subcommittee used the federal register and HFRA's guidance for determining the WUI. In an effort to identify the areas where "humans and their development intermix with wildland fuel," we identified the areas that have an urban density of at least one structure per forty acres *and* have hazardous fuels (Fuel Type III: tall flammable grass, heavy flammable brush, or heavy timber).

The 2005 iteration of the WUI included a larger-scale, *Primary WUI* that would be used for planning larger-scale fuels modification work (the Intermix Community). In addition, the committee determined that a smaller scale, *Secondary WUI* will be used to target property owners for educational efforts for reducing wildfire hazards around the home (the Interface Community). The difference in the Primary and Secondary WUI is the buffer associated with the original overlay of housing density and hazardous fuels (Map #4: Primary and Secondary Wildland Urban Interface).

Although the idea of 2 separate scales of the WUI worked well theoretically, it did not provide the level of detail or include local knowledge to truly make a distinction between high risk and low risk areas. In addition, there were many "outliers" that showed small areas of WUI in extremely rural areas with no development.

The 2012 WUI improves upon the 2005 WUI be creating a more realistic Wildland Urban Interface Boundary that includes all of the Communities at Risk identified by fire agencies. It also eliminates the outliers. Specifically, the analysis used a density indicator of 4 structures per 40 acres (as opposed to 1strucutre per 40 acres used in the 2005 edition) to identify clusters of residences. Areas meeting the density requirement were over laid with Fuel Type III (tall flammable grass, heavy flammable brush, or heavy timber) to determine where hazardous vegetation is adjacent to communities. To reduce the number of outliers, communities had to be larger than 5 acres to be included. The resulting areas were buffered to 660' and some areas were expanded to include Communities at Risk (CARs) identified by local fire professionals.

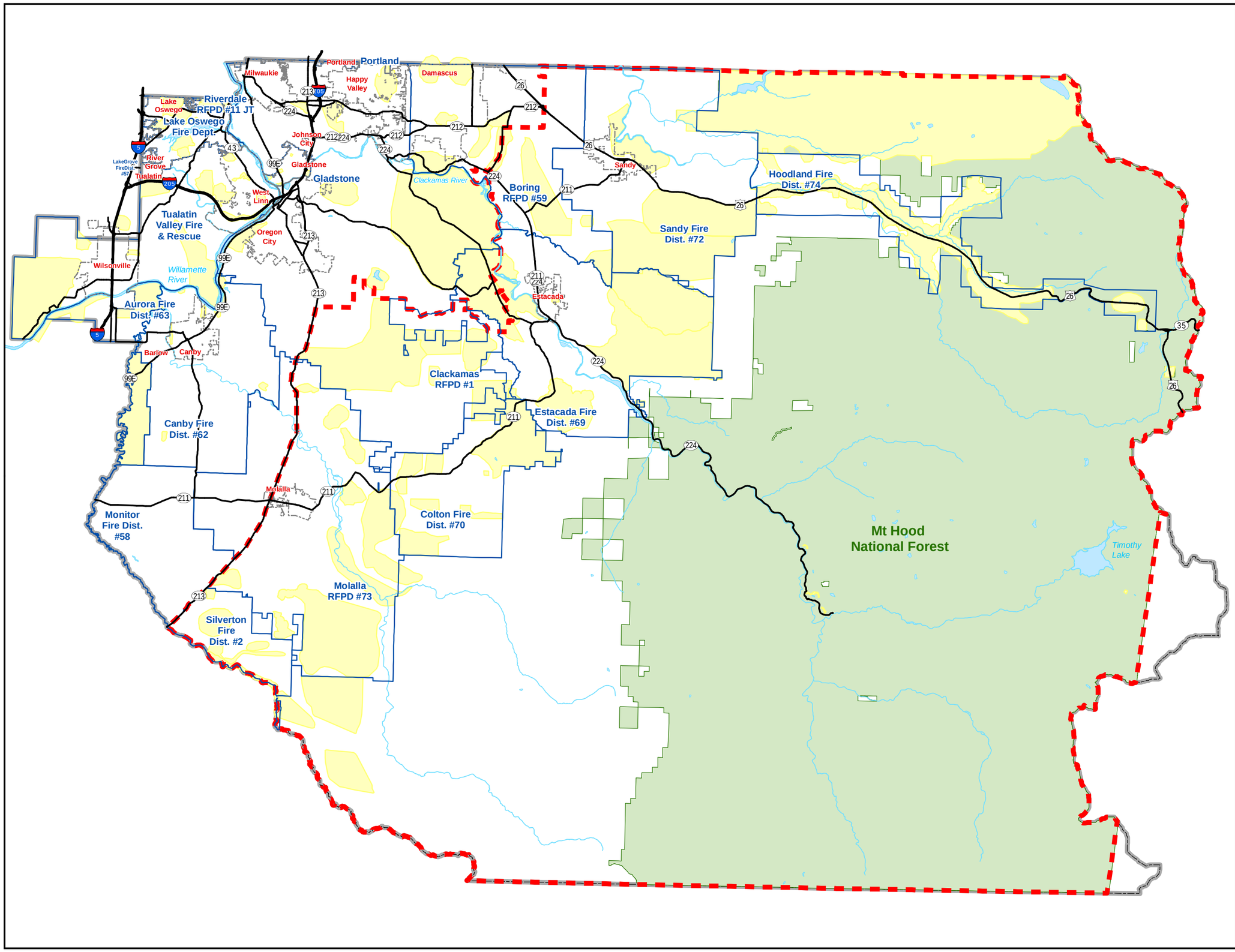
Overall Wildfire Risk

There have been no significant changes to the data included in the 2005 Overall Wildfire Risk Assessment (Map # 10). The primary landscape-level change would be additional development in the WUI, which is captured in the 2012 Wildland Urban Interface Map. The data used to determine the Overall Wildfire Risk Assessment are described in Table 4-2.

Table 4-2. Risk Assessment Elements

The Assessment considers four categories in determining the relative severity of fire risk. Structural Vulnerability is a fifth category that will be examined in local plans but is not considered at the state or county level due to limited available data.

Assessment Categories	Elements	Score
Hazard	Fuels (developed from vegetation information), Slope, Aspect, Elevation, Weather	0-80
Risk	Historic Fire Occurrence (derived from state and federal fire agency databases) and an estimation of ignition risk based on expert opinion and home density	5-40
Values	Life/Property as determined by home density (homes per 10 acres) and community infrastructure	0-50
Protection Capability	Fire Response Time (determined from fire district boundaries and district-reported response times) and Community Preparedness	0-40
Structural Vulnerability	Roof type, Defensible space, and Access	No Data



CCWPP Communities at Risk 2012

- Communities at Risk
- Fire Districts
- Oregon Department of Forestry
- Mt Hood National Forest
- City Boundaries

Fire agencies identified local Communities at Risk as those being particularly vulnerable to wildfires due to access, water, communications, terrain, ignition sources, public awareness and heavy vegetation.

Map #3

N W E S

0 1 2 4 6 8 Miles

CLACKAMAS COUNTY

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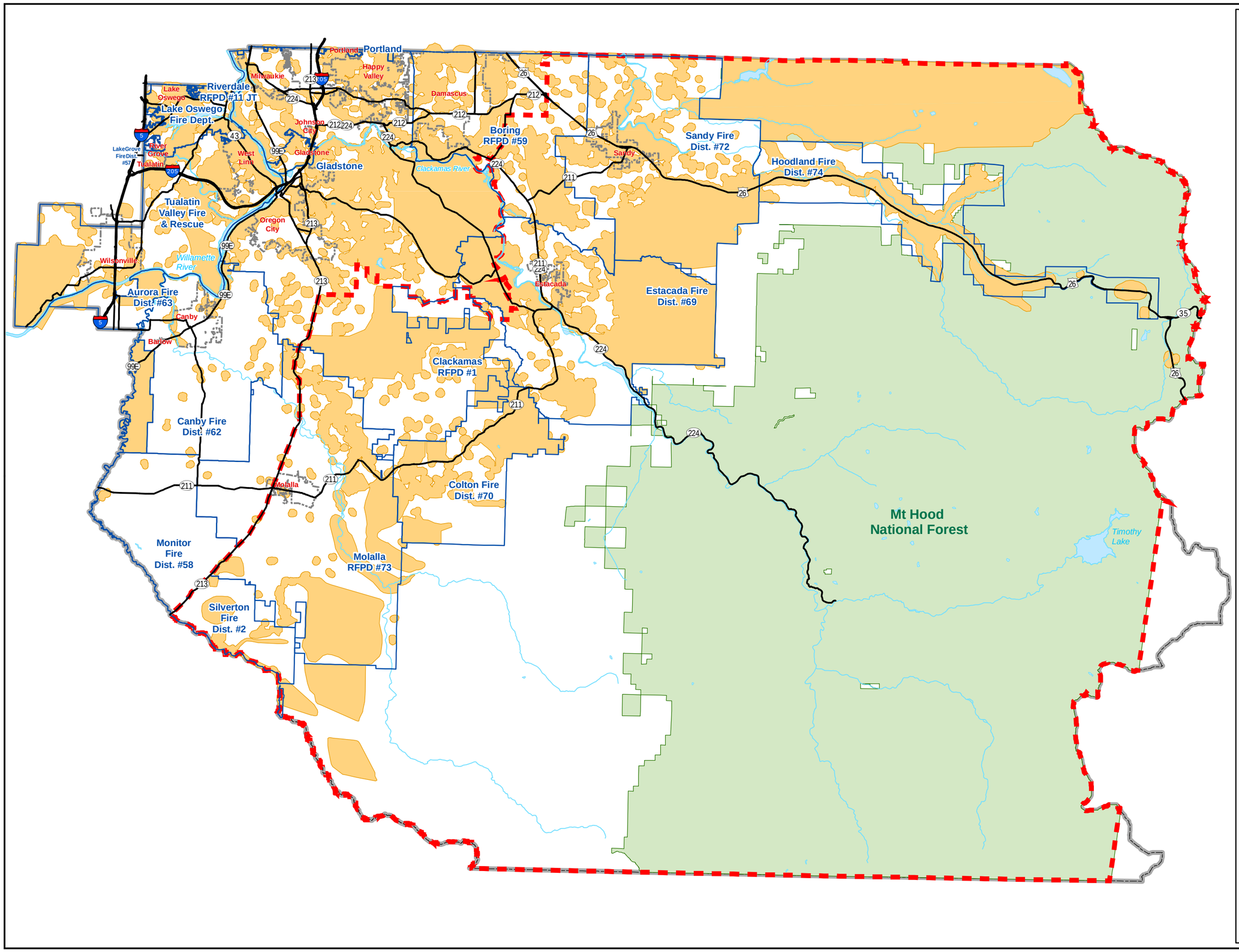

Wildland Urban Interface (WUI) 2012

WUI
Fire Districts
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries

WUI areas contain 4 structures per 40 acres and are within Fuel Type III (tall flammable grass, heavy flammable brush, or heavy timber). Each area meeting these criteria had to be larger than 5 acres to be included. The resulting areas were buffered to 660' and some areas were expanded to include entire locally-defined Communities at Risk (CARs).

Map #4

N
W E
S

0 1 2 4 6 8 Miles

CLACKAMAS COUNTY

GEOGRAPHIC INFORMATION SYSTEMS

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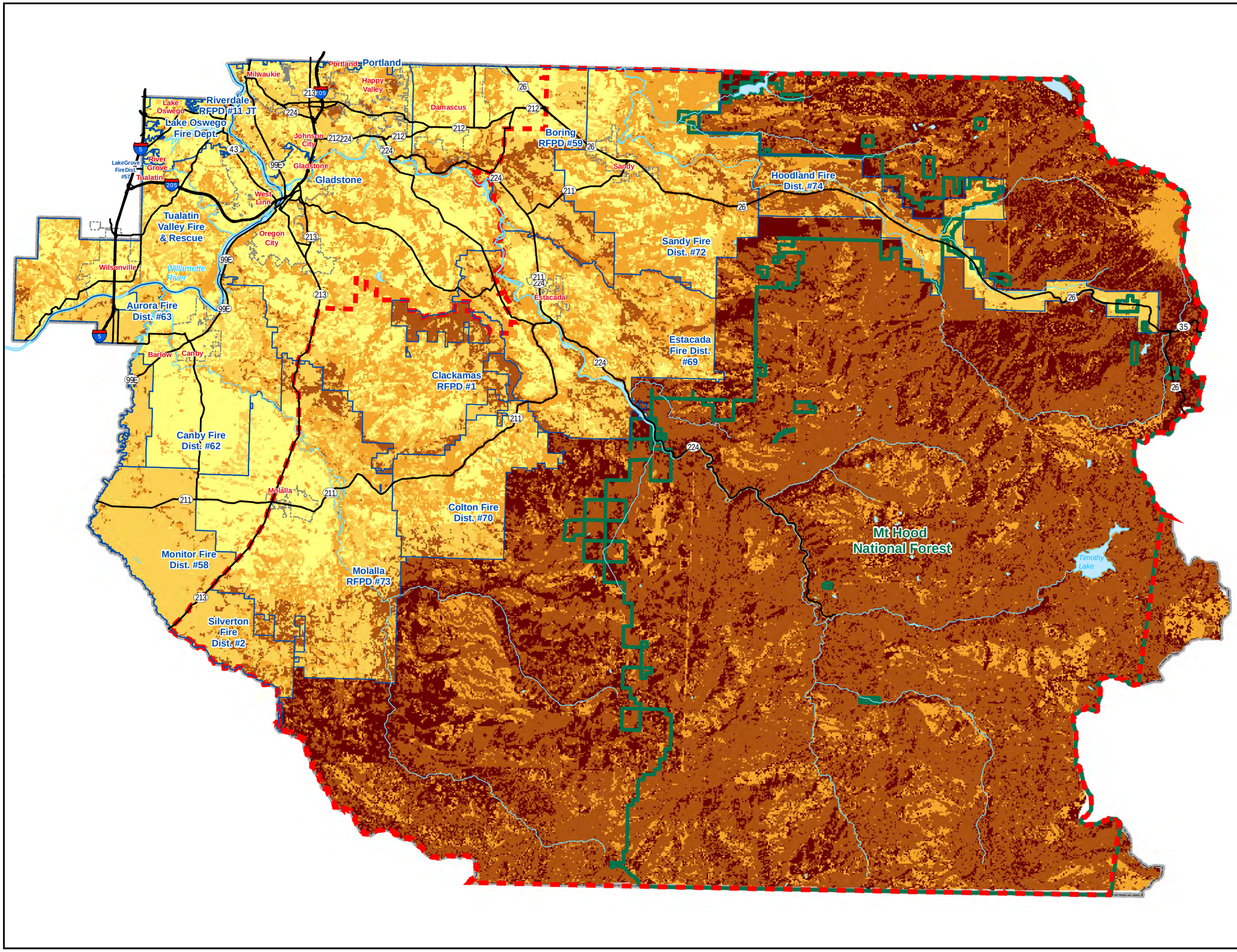

Overall Risk of Wildfire in Clackamas County

Fire Districts
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries

Overall Wildfire Risk

Value

Low
Low - Moderate
Moderate
Moderate - High
High

Overall Risk of Wildfire in Clackamas County determined from state-wide risk assessment model outlined in 2004 by the Oregon Department of Forestry using topography, weather, fuels, historic fire and ignition risk, community values and protection capabilities. Overall risk was not updated in 2012 due to lack of significant data changes.

Map #10

N
W E
S

0 1 2 4 6 8 Miles

CLACKAMAS COUNTY

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CHAPTER 5: HAZARDOUS FUELS REDUCTION & BIOMASS UTILIZATION

Fuels Reduction and Biomass Utilization in Clackamas County

Reducing hazardous fuels around homes, along transportation corridors and at a landscape scale can significantly minimize losses to life, property and natural resources from wildfire, which is a core focus of the Clackamas Community Wildfire Protection Plan.

Fuels Reduction Objectives (Revised 2012)

I. Implement fuels reduction projects in high-risk areas.

II. Coordinate administration of a county-wide fuels reduction program.

III. Consider opportunities for biomass utilization and adding value to extracted vegetation.

IV. Integrate fuels reduction into natural resources management plans to balance public safety with sustainable ecological management and economic activities.

Fuels Reduction & Biomass Utilization Accomplishments

The 2005 CCWPP served as a tool to enable partners to be highly competitive for grant funds to implement fuels reduction projects in communities at risk and adjacent public and private forest lands. In fact, over 1.7 million dollars has been procured to support fuels reduction projects, accounting for about 67% of the total grant funds received since 2005. The majority of fuels reduction projects implemented in the County have been led by the ODF, the North Clackamas Parks and Recreation District and the Clackamas Soil and Water Conservation District, using Title III and Western States Fire Manager's grant programs. Below please find the total funds received and fuels reduction acreage treated since 2005. For more information regarding the specific grants and project components, please see Table 1-2. CCWPP grant Funded Projects 2005-2012.

- Fuels Reduction Dollars: $1,710,968
  - ✓ Federal Acres: 141
  - ✓ Public/Private Acres: 1,039

    Total Treated Acres: 1,180

ODF Cost Share Program

Clackamas County is home to over 10,000 small woodland owners, and is rich in forest resources. However, many of these forest land owners have limited budgets for implementing fuels reduction projects. In addition, there is a compelling need to educate landowners about wildfire potential on their forest lands how to mitigate for fire while protecting and enhancing forest stands.

For this reason, the Molalla Unit of the Oregon Department of Forestry procured grant funds to support a fuels reduction program to provide technical and financial assistance to individuals and communities that have significant risk to wildfires.

The current grant programs encompass three scopes of interest: the promotion of healthy forests across the landscape, the development of defensible space around individual homes near forested lands, and the provision of support services to help communities near the forest become Firewise Communities. The cost share program is designed to offset the costs associated with forest

health and defensible space projects, and are typically paid using a 75% (ODF), 25% (landowner)ratio.

ODF Fuels Reduction Crew

The ODF Fuels Reduction Crew (Crew#58) is an eight to twelve-member seasonal crew responsible for implementing fuels reduction projects on public land or in community common areas. Crew#58 supplements the cost share program, which targets individual landowners. The crew is also trained in initial wildland fire response tactics, providing them with professional skills and enhancing ODF's ability to respond to local fire ignitions. Crew#58 has been funded by Title III grants for more than ten years and has become an essential element in fire prevention and response for the Molalla Unit of ODF. The reduction in funding levels and eventual sunset of the Secure Rural Schools and Self-Determination Act (Title III) jeopardizes ODF's ability to continue supporting the Fuels Reduction Crew.

Clackamas Parks Wildfire Management Plan

The *Clackamas Parks Wildfire Management Plan*[1] provides direction for reducing wildfire risk in parks managed by Clackamas County Parks (CCP) and North Clackamas Parks and Recreation District (NCPRD). Both agencies will use this plan to guide park management activities and help make park ecosystems more fire resilient, fire resistant, and where appropriate, fire adapted.

The Wildfire Management Plan provides a county wide assessment of park fire risk, with descriptions, maps and recommendations to manage wildfire risk. The project was initiated in response to findings from the 2005 CCWPP, which found that some parks, such as Mt. Talbert Nature Park, had potentially high concentrations of natural fuels near developed residential areas. As a result, the current planning effort was undertaken to provide fire management planning for parks with the highest risk for wildfire.

The project team assessed fire risk for all 89 CCP Parks and NCPRD parks and open spaces. The list was narrowed to 50 priority parks that were divided into high, moderate and low fire risk categories. Wildfire management strategies were developed for each of these sites, and park managers began implementing these recommendations for the highest priority parks in the Spring, Summer and Fall of 2012. For more information, please see the *Clackamas Parks Wildfire Management Plan*.

Fuels Reduction Actions

The Fuels Reduction Action Plan has been updated since 2005 to reflect accomplishments and ensure that the action plan remains relevant to current issues (Table 1-1.2012 CCWPP Action Plan). The high priority risk assessment actions to be addressed by the wildfire planning team will be to:

1) Develop and maintain and inventory of potential and successful FR projects by meeting with parks and natural lands managers quarterly.
2) Continue securing funding to implement projects/ hire seasonal ODF staff.
3) Coordinate a Fuels Reduction Project Tour.

[1] http://www.clackamasparkswildfire.org/

Sustaining Efforts: Collaboration & Biomass Utilization

Although CCWPP partners have been successful in securing funding for fuels reduction projects, the current economic climate and shifting governmental priorities could reduce grant allocations for this type of work. This underscores the need to develop innovative partnerships and identify revenue-generating biomass utilization opportunities in order to continue to reduce wildfire hazards throughout the county.

In an effort to create a more coordinated county-wide fuels reduction program, the 2012 CCWPP update included input from City and State Parks, Metro and other natural land managers regarding potential projects for consideration (Table 5-1). Map #11 illustrates the areas throughout the county that would benefit from fuels reduction work. Map #13 displays these areas in conjunction with Communities at Risk identified by local fire agencies to assist in project prioritization and planning. The county-wide fuels reduction partners have agreed to meet quarterly to share information and ideas for integrating fuels reduction strategies into natural resources management plans as a sustained, programmatic element.

Despite efforts to identify biomass utilization opportunities, the fuels reduction program in Clackamas County has not been able to access this market. In 2005, the Clackamas SWCD received a Title III grant to identify local inventory and volumes, sort yard feasibility and market analysis and development of a business plan to recruit private investment dollars. The market analysis resulted in a negative projection for a local sort yard due to the state of the log and chip market at the time.

Several attempts have also been made to access biomass markets working directly with nearby co-gen facilities, but there hasn't been sufficient material to offset the cost of transportation. However, the biomass industry continues to grow and new opportunities are developing. For example, Estacada High School currently uses a wood-fired boiler, Sustainable Northwest continues to work with rural communities to support biomass utilization for economic growth, and the Specialty Wood Products Website is connecting timber operators to biomass markets.

In addition, *Clackamas County's Agriculture Investment Plan* (2009)[2] includes a detailed Biomass Waste Utilization Economic Opportunity Strategy to grow markets for agriculture and timber producers. CCWPP Partners will continue to use biomass utilization as a tool to promote local economic development, reduce hazardous fuels and enhance the use of renewable energy locally and regionally.

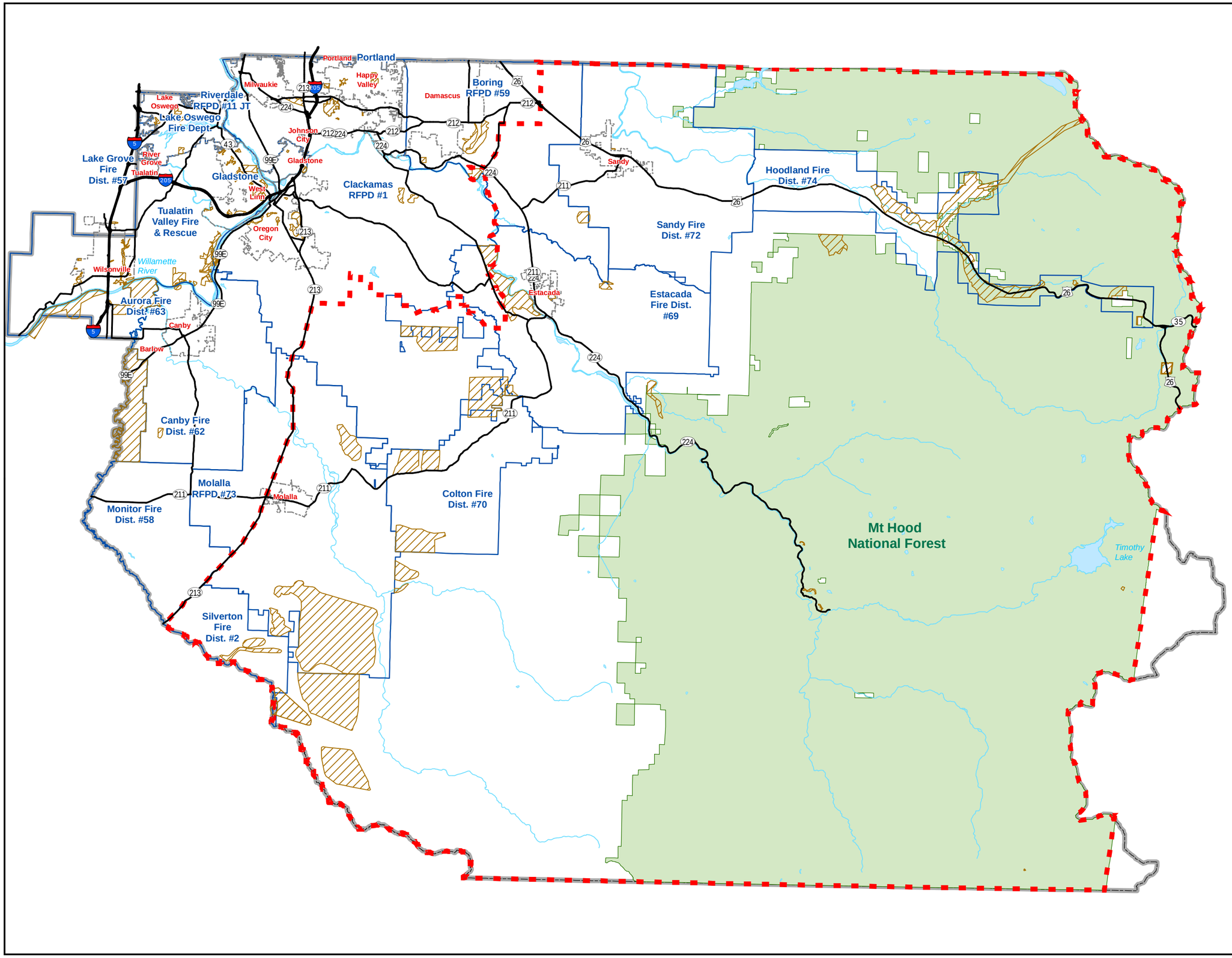
[2] Clackamas County Business and Economic Development (2012). *Clackamas County Agricultural Investment Plan*.

Table 5-1. Proposed Fuels Reduction Projects (2012)

Project Name	Project Manager	Land Owner	Land Manager	Priority	Vegetation Management Goals					Data Collected	Land Cover	Project Status	Funding
					Fuels Reduction	Invasive Species	Oak Restoration	Defensible Space	Critical Watershed				
BARTON PARK	County Parks	County Parks	County Parks	High	Yes	Yes	No	No	No	No	Open Space	Maint/Monit	Agency Funded
BILLY GOAT ISLAND	County Parks	County Parks	County Parks	Medium	Yes	Yes	No	No	No	No	Open Space	Maint/Monit	Funding Needed
HEBB PARK	County Parks	County Parks	County Parks	High	Yes	Yes	No	No	No	No	Open Space	Maint/Monit	Agency Funded
MADRONE WALL	County Parks	County Parks	County Parks	High	Yes	Yes	No	No	No	No	Open Space	In Process	Funding Needed
METZLER PARK	County Parks	County Parks	County Parks	High	Yes	Yes	No	No	No	No	Open Space	Maint/Monit	Agency Funded
THREE CREEKS	County Parks	County Parks	County Parks	High	Yes	Yes	Yes	No	No	No	Open Space	Maint/Monit	Agency Funded
BARLOWTRAIL	County Parks	County Parks	County Parks	Low	Yes	Yes	No	Yes	No	Yes	OTHER	Proposed	Funding Needed
MCIVER	County Parks	County Parks	Private	High	Yes	Yes	No	Yes	Yes	Yes	Forest Residential	Proposed	Funding Needed
EAGLE FERN CAMP	County Parks	County Parks	County Parks	Low	No	Yes	No	No	No	Yes	Open Space	Planned	Funding Needed
SPRING PARK	County Parks	County Parks	County Parks	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
FOREST CREEK	County Parks	County Parks	County Parks	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
PARKWAY WOODS	Gladstone	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
HAPPY VALLEY NATURE TRAIL	Happy Valley	Happy Valley	NCPRD	High	Yes	Yes	No	Yes	No	No	Forest Residential	Maint/Monit	Agency Funded
HighLAND SUMMIT	Happy Valley	Happy Valley	NCPRD	Medium	Yes	Yes	No	Yes	No	No	Open Space	In Process	Agency Funded
COOKS BUTTE PARK	Lake Oswego	Lake Oswego	Lake Oswego	High	Yes	No	No	Yes	No	No	Public Park	Proposed	Funding Needed
EAST WALUGA	Lake Oswego	Lake Oswego	Lake Oswego	Medium	Yes	Yes	No	Yes	Yes	No	Public Park	Proposed	Funding Needed
IRON MOUNTAIN	Lake Oswego	Lake Oswego	Lake Oswego	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
HOLT	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
DHOOGHE RD	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
FERNWOOD RD	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
WHISKEY HILL	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
EILERS	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
BUTTEVILLE	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
SUNDOWNER	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
BARTELL	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
GOLD,BRONZE, NICKEL	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
LOLO PASS	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	Yes	No	Forest Residential	Proposed	Funding Needed
SALO	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
BLUE	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
SAWTELL	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
SOUTH MAPLE GROVE	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
BOY SCOUT CAMP	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
GROSHUNG	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
SOUTH BUTTE CREEK	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed
RANGER WOODS	Local Fire Agency	Private	Private	High	Yes	Yes	No	Yes	No	Yes	Forest Residential	Proposed	Funding Needed

Project Name	Project Manager	Land Owner	Land Manager	Priority	Vegetation Management Goals					Data Collected	Land Cover	Project Status	Funding
					Fuels Reduction	Invasive Species	Oak Restoration	Defensible Space	Critical Watershed				
WILLAMETTE NARROWS	Metro	Metro	Metro	High	Yes	Yes	Yes	Yes	No	No	Forest Residential	In Process	Agency Funded
WILLAMETTE NARROWS PHASE 2	Metro	Private	Private	Medium	Yes	Yes	Yes	Yes	No	No	Forest Residential	Proposed	Funding Needed
CANEMAH INVASIVES	Metro	Oregon City	Metro	High	Yes	Yes	No	No	No	No	Public Park	Proposed	Funding Needed
CANEMAH OAK	Metro	Metro	Metro	High	Yes	Yes	Yes	No	No	No	Public Park	In Process	Grant Funded
CLEAR CREEK PRAIRIE	Metro	Metro	Metro	Medium	Yes	Yes	Yes	No	No	No	Open Space	In Process	Grant Funded
CLEAR CREEK THINNING	Metro	Metro	Metro	Medium	Yes	Yes	No	No	No	No	Forest Residential	In Process	Agency Funded
GRAHAM OAKS	Metro	Metro	Metro	High	Yes	Yes	Yes	No	No	Yes	Open Space	In Process	Funding Needed
NEWELL INVASIVES	Metro	Metro	Metro	High	Yes	Yes	No	No	Yes	No	Open Space	Proposed	Funding Needed
SCOUTER MOUNTAIN STABILIZATION	Metro	Metro	Metro	High	Yes	Yes	No	No	No	No	Open Space	Planned	Grant Funded
SPRINGBROOK PARK	Metro	Lake Oswego	Lake Oswego	Medium	Yes	Yes	No	Yes	Yes	No	Public Park	Proposed	Funding Needed
ELLA V. OSTERMAN	NCPRD	Happy Valley	NCPRD	Medium	Yes	Yes	No	Yes	No	No	Open Space	Maint/Monit	Agency Funded
MT TALBERT NATURAL AREA	NCPRD	NCPRD	NCPRD	High	Yes	Yes	Yes	Yes	No	No	Forest Residential	Maint/Monit	Agency Funded
SAWTELL & COOPERS ROADS	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
ELK PRARIE FAMILY CAMP	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
BUTTE CREEK	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
LAIS ROAD & NORTH FORK	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
RAMSBY UNPROTECTED	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
LOWER HIGHLAND & RIDGE	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
EAST HIGHLAND	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
WAPANITIA	ODF	Private	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
MOLALLA RIVER STATE PARK	OPRD	OPRD	Private	High	Yes	Yes	No	Yes	No	No	Forest Residential	Proposed	Funding Needed
MOUNTAIN VIEW CEMETERY	Oregon City	Oregon City	Oregon City	High	Yes	Yes	No	No	No	No	Open Space	Proposed	Funding Needed
SINGER CREEK PARK	Oregon City	Oregon City	Oregon City	Medium	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
ATKINSON PARK	Oregon City	Oregon City	Oregon City	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
WATERBOARD PARK	Oregon City	Oregon City	Oregon City	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
I -205 ROW	OTHER	OTHER	OTHER	High	Yes	Yes	No	Yes	Yes	No	ROW	Proposed	Funding Needed
SANDY RIVER PARK	Sandy	Sandy	Sandy	High	Yes	Yes	No	No	No	No	Open Space	Proposed	Funding Needed
GOVERNMENT CAMP	USFS	OTHER	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
KIWANIS CAMP	USFS	OTHER	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
SUMMER HOMES	USFS	USFS	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
TRILLIUM	USFS	USFS	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
WAPINITIA	USFS	OTHER	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
JOE GRAHAM	USFS	USFS	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
SISI	USFS	USFS	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed

Project Name	Project Manager	Land Owner	Land Manager	Priority	Vegetation Management Goals					Data Collected	Land Cover	Project Status	Funding
					Fuels Reduction	Invasive Species	Oak Restoration	Defensible Space	Critical Watershed				
RIPPLEBROOK	USFS	USFS	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
TIMBER LAKE	USFS	USFS	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
THREE LYNX	USFS	USFS	USFS	Medium	Yes	No	No	Yes	Yes	No	USFS	Proposed	Funding Needed
SANDY WS	USFS	Sandy	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
POWERLINE	USFS	OTHER	USFS	Medium	Yes	No	No	Yes	No	No	USFS	Proposed	Funding Needed
NF BEDFORD	USFS	USFS	OTHER	Medium	Yes	No	No	Yes	Yes	No	USFS	Proposed	Funding Needed
ZIG ZAG RANGER STN	USFS	USFS	USFS	Medium	Yes	Yes	No	Yes	No	No	USFS	Proposed	Funding Needed
BURNSIDE/MADDOX	West Linn	West Linn	West Linn	High	Yes	Yes	No	Yes	Yes	No	Open Space	In Process	Funding Needed
WILDERNESS PARK,	West Linn	West Linn	West Linn	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
HIDDEN SPRINGS	West Linn	West Linn	West Linn	Medium	Yes	Yes	No	Yes	No	No	Open Space	In Process	Funding Needed
INTERSTATE TRACTOR	West Linn	West Linn	West Linn	Medium	Yes	Yes	No	Yes	Yes	No	Open Space	Proposed	Funding Needed
MARY S YOUNG PARK	West Linn	OPRD	West Linn	High	Yes	Yes	No	No	Yes	No	Open Space	In Process	Funding Needed
ROBINWOOD PARK	West Linn	West Linn	West Linn	Medium	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
THE WHITE OAK SAVANNA	West Linn	West Linn	West Linn	High	Yes	Yes	Yes	Yes	Yes	No	Open Space	Proposed	Funding Needed
TROON OPEN SPACE	West Linn	West Linn	West Linn	Medium	Yes	Yes	No	Yes	Yes	No	Open Space	Proposed	Funding Needed
BUCK/BARLow	West Linn	West Linn	West Linn	Low	Yes	Yes	No	No	Yes	No	Open Space	Proposed	Funding Needed
WILDWOOD OPEN SPACE	West Linn	West Linn	West Linn	Medium	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
WEST LINN High SCHOOL	West Linn	OTHER	West Linn	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
CAMASSIA	West Linn	OTHER	West Linn	High	Yes	Yes	No	Yes	No	No	Open Space	Proposed	Funding Needed
TUALATIN WETLANDS	West Linn	West Linn	West Linn	High	Yes	Yes	No	No	No	No	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 1	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 2	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 3	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 4	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 5	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 6	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 7	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 8	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	Yes	Yes	Open Space	Proposed	Funding Needed
WILSONVILLE SROZ 9	Wilsonville	Wilsonville	Wilsonville	High	Yes	Yes	Yes	Yes	No	Yes	Open Space	Proposed	Funding Needed



Fuels Reduction Projects 2012

- Fuels Reduction Projects
- Fire Districts
- Oregon Department
- Mt Hood National Forest
- City Boundaries

Fuels reduction projects were identified with input from City, County and State Parks, Metro, USFS, ODF and other natural land managers to reduce hazardous fuels and create wildfire resilient landscapes. Projects represented here range from proposed to completed.

Map #11

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CLACKAMAS COUNTY

GEOGRAPHIC INFORMATION SYSTEMS

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OREGON CITY, OREGON 97045

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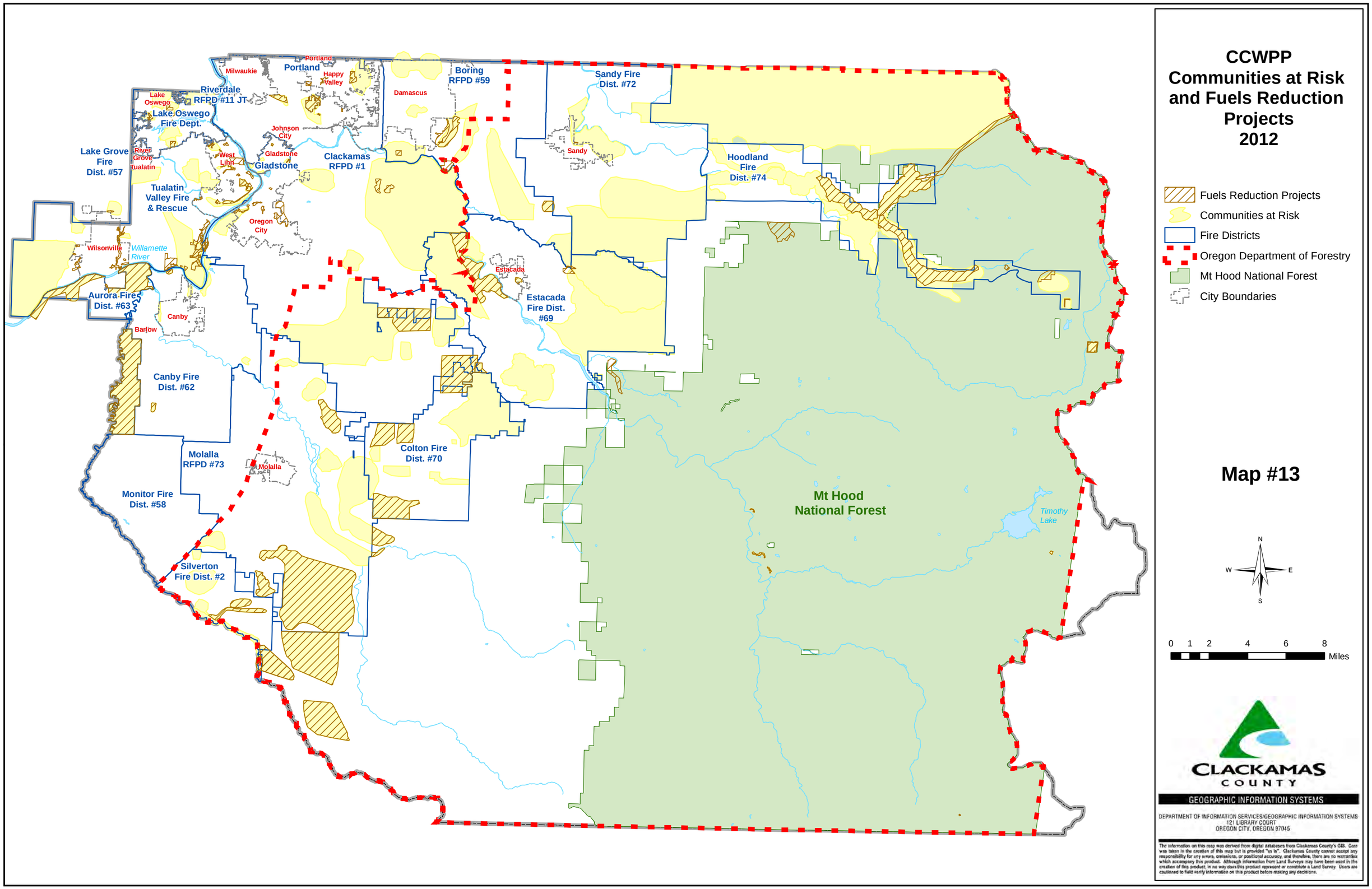
CCWPP
Communities at Risk and Fuels Reduction Projects
2012
Fuels Reduction Projects
Communities at Risk
Fire Districts
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries
Map #13
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Miles
CLACKAMAS COUNTY
GEOGRAPHIC INFORMATION SYSTEMS
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Portland
Milwaukie
Portland
Happy Valley
Boring RFPD #59
Sandy Fire Dist. #72
Damascus
Lake Oswego
Riverdale RFPD #11 JT
Lake Oswego Fire Dept.
Johnson City
Lake Grove Fire Dist. #57
River Grove
Tualatin
West Linn
Gladstone
Gladstone
Clackamas RFPD #1
Sandy
Hoodland Fire Dist. #74
Tualatin Valley Fire & Rescue
Oregon City
Wilsonville
Willamette River
Estacada
Estacada Fire Dist. #69
Aurora Fire Dist. #63
Canby
Barlow
Canby Fire Dist. #62
Colton Fire Dist. #70
Molalla RFPD #73
Molalla
Monitor Fire Dist. #58
Mt Hood National Forest
Timothy Lake
Silverton Fire Dist. #2

CHAPTER 6: EMERGENCY OPERATIONS

Clackamas Fire Operations Group (CFOG)

The Clackamas Fire Operations Group (CFOG) is a technical subcommittee of Clackamas District Fire Defense Board. The CFOG is responsible for coordinating fire operations issues and procedures for all fire districts in Clackamas County. The CFOG extended its membership to wildland fire agencies to address potential wildfire issues.

The CFOG has been focused on regional fire operations issues, and as such has not been meeting regularly to discuss local issues. The 2012 CCWPP Update engaged the CFOG to update the CWPP Emergency Operations Action Plan, and invigorated the group to continue meeting to address the high priority actions that need to be taken to improve wildland response efforts.

Emergency Operations Objectives

I. Enhance interoperability of fire districts, USFS, ODF, and neighboring jurisdictions.

II. Improve upon current system for utilizing fire resources within the county and neighboring jurisdictions.

III. Clarify and exercise policies and procedures from the Fire Operations Center (FOC) and Emergency Operations Center (EOC).

The following Objective has been completed and thereby removed from the list because ICS is now integrated pragmatically into training standards.
Strengthen Incident Command Systems and improve efficiency in wildfire response efforts by setting and implementing consistent, all-hazard training standards.

Emergency Operations Accomplishments

Many of the action items pertaining to integration of the National Incident Management System and Incident Command System revised training standards into training programs have been accomplished. In addition, the Department of Public Safety Standards and Training (DPSST) and National Wildland Coordinating Group (NWCG) have made progress in aligning training standards for wildland and structural firefighters.

The Clackamas County Fire Prevention Cooperative procured $100,000 in funding to purchase and post address signs in the highest priority areas throughout the County. Each Fire Agency provided high priority areas for signage (Table 6-1. Address Signage)

Emergency Operations Actions

The Emergency Operations Action Plan has been updated since 2005 to reflect accomplishments and ensure that the action plan remains relevant to current issues (Table 1-1.2012 CCWPP Action Plan). The high priority risk assessment actions to be addressed by the wildfire planning team will be to:

1) Include 12 hour operation period in FDB Fire Mutual Aid Agreement.

2) Develop an FDB Communications Work Group.

3) Conduct a Conflagration Exercise.

Table 6-1. Priority Roads for Address Signage

Molalla Fire District	Colton Fire District	Estacada Fire District	Hoodland Fire District	Monitor Fire District	Canby Fire District	Boring Fire District	Clackamas Fire District	Silverton Fire District
Wright Rd	Bitner Mill Rd	Hillockburn Rd	Bailey Rd	Hwy 211	Central Point Rd	Gold Rd	Unger Rd	Blair Rd
Ramsby Rd	Cox Rd	Springwater Rd	Cottonwood Rd	Barlow Rd	Union Hall Rd	Bronze Rd	Lewellen Rd	Butte Creek Rd
Fernwood Rd	elwood Rd	Benjamin Rd	Country Club Lp	Meridian Rd	Bremer Rd	Iron Rd	Butte Rd	Evergreen St
Callahan Rd	Log House Rd	Habelt Rd	Little River Rd	Kropf Rd	New Era Rd	Nickel Rd	Viola Welch Rd	Groshong Rd
Wilhoit Rd	Look Rd	Horner Rd	Minikahda Ave	**$5,424.00**	**$4,271.40**	Land Rd	Fellows Rd	Maple Grove Rd
Ball Rd	Mountain View Rd	Morgan Rd	Mountain Dr			Eagle View Dr	Leisure Ln	Marquam Cir
Kuban Rd	Shibley Rd	Pederson Rd	Shadow Ln			**$710.50**	Forest Park Rd	Meadow Ct
$4,645.60	Uphill Rd	Sparky Ln	Twin Bridges Ln				Woodview Ln	Nowlens Bridge Rd
	Upper Highland Rd	**$4,756.80**	Wildwood Ave				Mountain Ter	Prospect Dr
	Wilcken Rd		Yellow Brick Rd				Schockley Rd	Wildcat Rd
	Bonney Rd		Arthur Hailey Rd				Mosier Creek Ln	**$6,267.60**
	Engstrom Rd		Faubion Lp				Dianne Dr	
	schieffer Rd		Hemlock Dr				Shelly Ln	
	$4,002.00		Hillview Dr				Alberta Rd	
			Hofeldt Dr				Cate Ln	
			Jennie Ln				Schuebel Ln	
			McFarland Rd				Jean Way	
			Old Smokey Rd				Redfir Dr	
			Pinner Rd				Hayfield Rd	
			Salmonberry Rd				**$4,625.50**	
			Section Line Rd					
			Spring St					
			Thimbleberry St					
			Tigerlilly Dr					
			$2,523.00					

CHAPTER 7: EDUCATION AND COMMUNITY OUTREACH

Clackamas County Fire Prevention Cooperative

The Clackamas County Fire Prevention Cooperative is a consortium of structural and wildland fire agencies, as well as other public interest groups with a vested interest in fire prevention. The Clackamas County Fire Co-op addresses both structural and wildland fire prevention, and has incorporated the CCWPP educational and outreach effort into its program.

Clackamas County Fire Prevention Co-op Objectives

I. To unite those agencies engaged in fire prevention, safety, and public education in the Clackamas County area.

II. To promote an interagency exchange of ideas, programs, and resources in the area of fire prevention, safety, and public education.

III. To promote, coordinate, and actively support interagency participation in fire prevention activities.

IV. To act as a point of contact for the exchange of professional information among its members and the public.

V. To promote a reduction in the number of human-caused fires and preventable injuries within the jurisdiction of the Co-op through a program of public education.

Fire Prevention Cooperative CWPP Accomplishments

The Clackamas CWPP provided the catalyst for a great deal of wildfire prevention and outreach activities throughout the County. The Co-op has been successful in obtaining grant funds to implement the four highest priority actions identified in the Clackamas CWPP Action Plan:

1) Developed and distributed Wildland Urban Interface packet.
2) Installed fire danger rating boards in key viewing areas throughout the County.
3) Developed and distributed Burn Permitting and Fire Restrictions Brochure.
4) Incorporated fire-safety messages on Safeway grocery bags.

Education & Community Outreach Actions

The Education & Community Outreach Action plan has been updated since 2005 to reflect accomplishments and ensure that the action plan remains relevant to current issues (Table 1-1.2012 CCWPP Action Plan). The high priority risk assessment actions to be addressed by the wildfire planning team will be to:

1) Develop Firewise toolkit for CAR's.
2) Create incentives for fuels reduction.
3) Update and distribute the Burn Permitting and Fire Restrictions Brochure.
4) Implement a Burn Barrel Program.
5) Continue to improve address signage throughout the County.

2012 CWPP Public Outreach Process

In an effort to align public outreach processes, the WFPEC partnered with the North Clackamas Parks and Recreation District Wildfire Management Plan team to use a variety of forums for engaging and educating the public about wildfire hazards. Flyers and notifications were sent to homes in the WUI area adjacent to County Parks for which fuels reduction activities were planned. A website was also established to provide wildfire resources for the public and participating agencies.

In addition, two neighborhood workshops were conducted to educate the public about wildfire risk, provide an opportunity for citizens to give input on plan recommendations and proposed projects; and learn about ways to reduce risk on their own property. Feedback from the public helped either confirm or change the planning process, outcomes, and individual park management plans as well as CCWPP action items. The first workshop, February 7th, 2012 at the Carver School focused on the Madrone Wall fuels reduction project. For details regarding these workshops, please see the *Clackamas Parks Wildfire Management Plan*.

Firewise Community/USA Success Stories

ODF received Title III funding to promote the Firewise Communities/USA Program, with the goal of creating certified communities in high priority Communities at Risk. The five steps to become a Firewise Community are as follows:

- Obtain a wildfire risk assessment as a written document from your state forestry agency or fire department.
- Form a board or committee, and create an action plan based on the assessment.
- Conduct a "Firewise Day" event.
- Invest a minimum of $2 per house in local Firewise actions for the year.
- Submit an application to your state Firewise liaison.

Zig Zag Village & Government Camp

Zig Zag Village and Government Camp have been identified as Communities at Risk (CAR) by the Hoodland Fire District. These communities are aware of the risk of wildfire and are taking steps to mitigate this risk by participating in the National Firewise Recognition Program. Zig Zag Village and Government Camp located just off of Highway 26 on Mount Hood. There are approximately 75 homes in Zig Zag and over 400 in Government Camp. These communities are excellent examples of the Wildland Urban Interface because they are characterized by residential homes surrounded by heavy fuels, limited access, steep slopes and limited protection capability. In addition, the majority of homes in these areas are vacation homes, making it more difficult to engage homeowners in wildfire risk reduction.

The Zig Zag Home Owners Association and Government Camp Community Planning Organization worked with the ODF and Hoodland Fire to assess wildfire hazards throughout the community and develop strategies to mitigate them. Firewise Community Clean-Up Day were held to begin implementing the Firewise recommendations for becoming more wildfire resilient. Participation in the Firewise Communities/USA Program is an ongoing process of community commitment to wildfire safety. ODF and Hoodland Fire will continue working with the Zig Zag Village HOA to reduce wildfire hazards and retain Firewise/USA certification.

Table 7-1. 2012 Clackamas Fire Prevention Co-op Activities

Current Activities	Lead Agency	Effectiveness	Cause Type
All Year			
Chimney Brush Program	Estacada, Sandy, Hoodland	High	General
CERT Program in Highschools	Silverton, Estacada	High	General
Address Sign Program	TVF&R, ODF, Silverton, Hoodland	High	General
Fuels Reduction Cost Share	ODF	High	Debris Burning
JFIN Fire Safe Children and Families Programs	All Fire Co-op Members	High	Juveniles
Free smoke alarm programin high risk areas.	SFMO, TVF&R	High	General
Senior Fire and Fall Prevention and Train-the-Trainer Safety Program	SFMO, TVF&R	High	General
Burn Permitting	All Fire Co-op Members	High	Debris Burning
Raids on Smoke shops /Retail Stores	All Fire Co-op Members	High	Smoking
Education Events with Grade School	All Fire Co-op Members	High	Juveniles
Safety Fairs, Community Preparedness	All Fire Co-op Members	High	General
Sparky's Hazard House	All Fire Co-op Members	High	General
Firewise Hand Outs	Fire Co-op	Moderate	Smoking
Defensible Space Presentations	Fire Co-op	Moderate	General
Wood Cutter Program	Molalla, ODF, Hoodland	Moderate	Equipment Use
SFMO has Juvenile arson outreach materials: Measure 11	SFMO	Moderate	Juveniles
Respond to burn complaints	Fire Co-op	Low	Recreation
Spring			
Tree School	ODF	High	General
K-12 Team Teaching North & South	All Fire Co-op Members	High	General
Spark Arrester	All Fire Co-op Members	High	Equipment Use
Station Tours and Pub Ed Requests	Fire Co-op	Moderate	Juveniles
PNW Sportsman Show	USFS	Moderate	Recreation
Molalla Sportsman Show	ODF	Moderate	Recreation
Annual ODF operators dinner industrial fire prevention.	ODF	Moderate	Equipment Use
Articles in local papers	Fire Co-op	Moderate	General
School Arson Prevention Program	Fire Co-op	Moderate	Arson
Summer			
Daily & Weekly Patrol, Post Signs	ODF	High	Debris Burning, Equipment Use
RUCP Articles in news paper	ODF	High	Equipment Use
Fly-in Cruise-in	ODF	Moderate	General
Fall			
PTA and Grades K-2,	All Fire Co-op Members	High	Juveniles
World Forestry Center	USFS, ODF	High	General
Score One For Safety (PGE Park)	USFS, ODF	High	General
Annually			
JFIN School Arson	All Fire Co-op Members	High	Arson
Hazard House at Estacada Fire Station	Estacada	High	Juveniles
OSP, CCSO Safety Curriculum	Molalla	Moderate	Recreation
Molalla Town Hall Meeting	Molalla, ODF	Moderate	General
After an Incident			
Work with media after an incident to promote fire prevention.	All Fire Co-op Members	High	General

Table 7-2. Clackamas County Fire Prevention Cooperative Action Plan

Cause	Proposed Activities	Rank	Resources Needed	Potential Funding/Resource Sources	Lead Agency	Timeline	Schedule for Distribution	Cost Estimate	Progress 2012
Debris Burning	Develop a step by step process for outreach to Communities at Risk; including Firewise presentations.	1	Coordination	None Needed	Fire Co-op (with direction from Fire Defense Board)	Long-Term Ongoing	Spring/Fall	$25,000	Firewise presentations have been given at 12 communities at risk. ODF received grant funds to create 2 Firewise Communities before Sept. 30 2012.
Debris Burning	Develop relationships and incentives for a Fuels Reduction Program.	2	Coordination, Staffing, Funding	WFSM, Title III, NFP	ODF, USFS, County/City Parks, Metro, SWCD	Ongoing	All Year	Varies	Collectively, partners were awarded over $1 million to implement fuels reduction projects in Clackamas County; about half of which was an ODF a cost share program for removing hazardous fuels.
Debris Burning	Update the burning brochure and target areas for mailing based on the Communities at Risk.	3	Coordination, Staffing, Funding	NFP, Title III, other grant sources, Fire Districts	Fire Co-op	Short-Term Ongoing	All Year	Received $1,000	The Fire Coop received a Burn barrel grant from KOG in 2007. The barrels need to be manufactured and advertised. $30 each
Debris Burning	Develop and promote "Burn Barrel" program. Strengthen the relationship with the SFMO to build support for the burn barrel program.	4	Coordination, Funding	NFP, Title III, other grant sources	Fire Co-op	Short-Term Ongoing	Could use different videos throughout the year . Could use County Cable.	FREE!	Defensible Space and Debris Burning brochures were created and mailed to all WUI residents in 2006
General	Develop and distribute address signs for homes and potential water sites in the WUI.	1	Coordination, Staffing, Funding	Title III	Fire Co-op	Ongoing	All Year		ODF received Title III funds to purchase and distribute address signs in the WUI.
General	Support home sprinkler campaign	2	Funding	NFP, Title III, other grant sources, Fire Districts	Fire Co-op	Short-Term	All Year	Materials: $150 each Labor: ODF-FREE!	ODF received $$$$ for building and installing Fire Danger rating signs in high priority areas in 2006 and will continue to seek funding.
General	Purchase Fire Danger Rating Signs for all Fire Stations	3	Coordination, Staffing, Funding	NFP, Title III, other grant sources	Fire Co-op	Short-Term	NA	Unknown	Completed in 2006
General	Collect all brochures, handouts, videos; select most effective ones, purchase new materials where needed.	4	Funding and Staffing	NFP, Title III, other grant sources	Fire Co-op	Short-Term Ongoing	Spring/Summer	$30,000	USFS does press releases; ODF provides buckets with fire safety message
General	Work with Law enforcement to implement a firework safety program. Target distributers.	5	Coordination, Staffing, Funding	NFP, Title III, other grant sources, Fire Districts	Fire Co-op	Short-Term Ongoing	All Year	Staff $5,000-$10,000	
General	Promote CERT in schools or other programs that incorporate fire safety into school curriculum.	6	Coordination, Staffing, Funding	Fire Districts	Fire Co-op	Short-Term Ongoing	All Year	$2,000	
Smoking	Distribute smoking-related fire prevention materials.	1	Coordination, Funding	NFP, Title III, other grant sources	Fire Co-op	Short-Term Ongoing	All Year	$5,000	Percentage remains fairly constant even after the Fire Safe cigarette legislation was passed in 2009. Ban on novelty lighters in 2009
Smoking	Work with SFMO to target retailers for messaging.	2	Coordination, Funding	NFP	Fire Co-op	Short-Term Ongoing	Annually	$1,000	

Cause	Proposed Activities	Rank	Resources Needed	Potential Funding/Resource Sources	Lead Agency	Timeline	Schedule for Distribution	Cost Estimate	Progress 2012
Recreation	Request contact information for all licensed hunters from ODFW, and provide fire safety information to them via targeted mailing.	1	Funding	NFP, Title III, other grant sources	ODF, USFS	Short-Term Ongoing	August & Winter	$20,000	
Recreation	Utilize Oregon Equestrian Trail Club Association for Public Outreach	2	Coordination	USFS will provide coordination	Fire Co-op	Ongoing	All Year	NA	
Recreation	ATV Club- Incorporate regulated use in annual meetings- frame this as an opportunity for boots on the ground to keep an eye out for illegal and suspicious activities.	3	Coordination	No funding needed; DMV has listing of ATV clubs.	Fire Co-op	Short-Term Ongoing	Forest Service will get annual meeting schedule	NA	Posting regulated use in motorcycle shops.
Recreation	Obtain funding for and distribute buckets with fire safety message	4	Funding and Staffing	NFP, Title III, other grant sources	ODF	Short-Term	Summer: Zig Zag & Clackamas Ranger Station and ODF in	$3,000	Ongoing-began in 2006 using Title III funds. ODF still has buckets that are taken to fire works stands.
Recreation	Develop and post signage for gun and ammunition shops.	5	Coordination	No funding needed	Fire Co-op	Short-Term Ongoing	All Year	NA	Currently posting regulated use and other fire danger information in gun & ammunition stores
Recreation	Distribute grocery bags with fire safety message.	6	Funding and Staffing	NFP, Title III, other grant sources	ODF, USFS, Regional Fire Co-ops	Short-Term	Summer: Zig Zag & Clackamas Ranger Station	$5,000	Done 2006/ continue to seek funding
Juveniles	Provide intervention services to juveniles who misuse fire or as requested.	1	Current funding through 2012	FEMA, Other grant programs for youth programs	Fire Safe Children and Families		All Year	None	Received FEMA Assistance to firefighters grant in 2011 through 2012 to implement program.
Juveniles	Provide handouts to teachers and parents regarding "first signs of fire interest"; learning to respect fire	2	Coordination, Funding	NFP, other grant sources,	Fire Co-op	Short-Term Ongoing	Beginning of school year	$5,000	Using the "school fires" SFMO materials …get these materials to the administrators when we do team teaching
Juveniles	Obtain middle school fire prevention curriculum and train instructors.	3	Coordination, Staffing, Funding	NFP, Title III, other grant sources, Fire Districts	Fire Co-op	Short-Term Ongoing	Annually	$1,000	SFMO has a full curriculum look into this for training in Clackamas County- a way to look at team teaching
Juveniles	Encourage "Keep Oregon Green" to be more involved in poster and other programs.	4	Coordination	Invite KOG to be a Co-op member	Fire Co-op	Short-Term Ongoing	NA	NA	

CHAPTER 8: STRUCTURAL IGNITABILITY POLICIES AND PROGRAMS

Structural Ignitability Policies and Programs

Structural Ignitability deals with the home itself and its immediate surroundings; also known as the "Home Ignition Zone." The Home Ignition Zone includes the home and an area surrounding the home within 100-200 feet. Important factors that either deter or promote Structural Ignitability include:

- **The Structure Itself:** roofing, roofing assembly, building materials and building setbacks on slopes
- **Defensible Space**: Distances 30-100 feet or more of fire resistant vegetation around homes
- **Fire Access:** Road, driveway and bridge width and condition

Structural Ignitability Objectives

I. Review rules/laws/guidance pertaining to wildfire planning, prevention, protection, and develop recommendations for improvements.

II. Coordinate and facilitate communication between County Planning and Building and the fire districts.

III. Identify incentives for property owners to participate in fire prevention activities, including maintenance of defensible space, use of fire-resistant building materials, etc.

IV. Inform public about codes and ordinances related to wildfire prevention and solicit feedback from the public regarding recommended improvements.

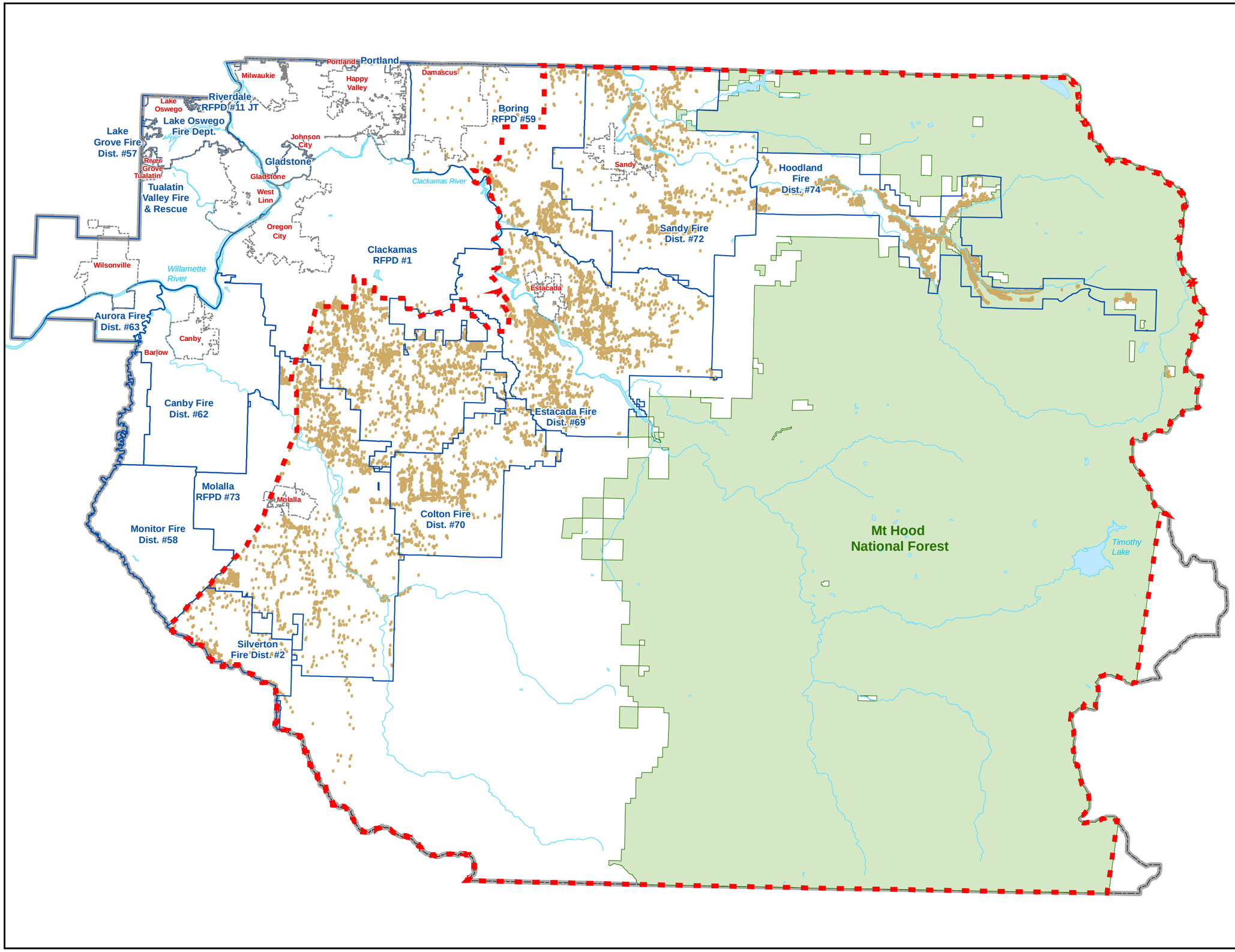
Structural Ignitability Action Items

In order to effectively reduce structural ignitability, there must be coordination and communication between fire professionals and regulatory agencies including the State Fire Marshal's Office, the Clackamas County Land Use Planning Division and the Clackamas County Building Division. The 2005 CCWPP included a series of Structural Ignitability Action Items designed to provide direction and facilitate improved coordination among these agencies. Since 2005, a great deal of progress has been made to strengthen these relationships, which has resulted in more effective implementation of the Oregon Fire Code. For a complete listing of progress made since 2005, please see Table.1-1. CCWPP 2012 Action Plan. The 2012 CCWPP Update process identified the following priorities for implementation:

1) Identify a DTD representative for the WFPEC.
2) Improve coordination with Rural Fire Agencies.
3) Integrate WUI into Plan Map and include a public outreach strategy.

Data Collection and Assessment of Structural Ignitability (Map #14)

In 2005, ODF used Title III funds to purchase Global Positioning System (GPS) units (purchased using Title III grant funds) equipped with structural triage software in an effort to improve the mapping of structures and other features important for wildland firefighting within the ODF Protection District. Over 10,000 homes have been assessed. This effort expanded upon the 2005 pilot project which focused on the Summer Homes area in the Hoodland Corridor.



Clackamas County Structural Triage Inventory 2012

- Triaged Structures since 2004
- Fire Districts
- Oregon Department of Forestry
- Mt Hood National Forest
- City Boundaries

Structural triage data was captured by multiple fire agencies and Clackamas County from 2004-2011. ODF and others used GPS units equipped with structural triage software to improve the mapping of structures and other features important for wildland firefighting predominantly within the ODF Protection District. Over 10,000 homes have been assessed.

Map #14

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CLACKAMAS COUNTY

GEOGRAPHIC INFORMATION SYSTEMS

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CHAPTER 9: SUSTAINING EFFORTS, MONITORING AND EVALUATION

Wildfire Planning Executive Committee (WFPEC)

The Wildfire Planning Executive Committee was charged with oversight of the CWPP. Although the WFEPC continued to meet quarterly, the roles of the WFPEC member agencies were difficult to sustain over the last several years due to staffing and programmatic changes of partner agencies. The 2012 CCWPP Update process strengthened the WFPEC by providing more structure for meetings and creating a more realistic action plan. The WFPEC is also developing a series of bylaws for consistency in agency representation and participation.

Mission Statement

The Wildfire Planning Executive Committee (WFPEC) will continue to foster a collaborative and cooperative environment between members, the wider community, and interested stakeholders to understand and mitigate the risks of wildfire.

Membership, Roles and Responsibilities

The WFPEC will be composed of representatives from the following agencies.

- Clackamas County Emergency Management
  - ✓ Serve as Committee Chair (duties described below)
  - ✓ Liaison for County EOC
  - ✓ Liaison for Natural Hazard Mitigation Plan
- Oregon Department of Forestry
  - ✓ Liaison for Clackamas Fire Prevention Cooperative
  - ✓ Fuels reduction project funding, selection and implementation
  - ✓ Liaison for Clackamas Fire Operations Group
- United States Forest Service
  - ✓ Fuels reduction on USFS land
  - ✓ Secondary liaison to Clackamas Fire Prevention Cooperative
  - ✓ Secondary liaison for Clackamas Fire Operations Group
- Clackamas County Parks
  - ✓ Liaison for County Parks Program
  - ✓ Fuels reduction project funding, selection and implementation
- Clackamas County Fire Defense Board
  - ✓ Liaison for Fire Defense Board
- Clackamas County Forestry
  - ✓ Liaison for County Forests program
- Clackamas County Geographic Information Systems
  - ✓ Lead hazard assessment process
- Clackamas Department of Transportation and Development
  - ✓ Liaison for Land Use Planning and Building Divisions
  - ✓ Coordinate efforts with State Fire Marshal's Office

The CCWPP articulates the need to extend WFPEC membership to other stakeholders such as but not limited to insurance companies, local businesses and citizen representatives. Technical advisors including but not limited to the following agencies may be called upon to offer specific expertise for project development and implementation:

- Bureau of Land Management
- Oregon State Fire Marshal
- Clackamas Soil and Water Conservation District
- Keep Oregon Green

Officers

Committee Chair – Facilitate the activities of the WFPEC. Responsibilities include convening the committee, developing agendas, coordinate subcommittees as necessary, acting as a liaison for fire districts, and facilitating the annual review. The incumbent of this position will be from Clackamas County Emergency Management.

Administrative Chair – Provide administrative support to the committee. Responsibilities include the taking of and distribution of minutes and the provision of assistance with other reporting and updates. The incumbent of this position will be identified annually.

WFPEC Meeting Schedule & Structure

The WFEPC will meet on a quarterly basis. Designated WFEPC Members will provide quarterly progress reports on the following action plans, and will convene Technical Committees as needed. Technical Committee membership will be made up of representation proper to address the need(s) at hand.

- Risk Assessment : County GIS
- Hazardous Fuels Reduction : ODF, CC Parks, CC Forestry, USFS
- Reducing Structural Ignitability: County DTD (or Emergency Management in lieu of)
- Emergency Operations: ODF, USFS, FDB Representative
- Education and Outreach: ODF

Monitoring /Reporting

The WFPEC will monitor activities undertaken in support of and coordination with the CCWPP through regular meetings and annual progress reports. Member agencies will provide individual activity reports during regularly scheduled committee meetings. The Committee Chair will request a Progress Report from each member agency each January. Progress Reports must be completed within one month. The Administrative Chair will incorporate the progress reports into the CCWPP. The following meeting will be dedicated to sharing member activities and the developing of a collective report. Highlights will be to identify exemplary project successes, procedural difficulties, and lessons learned to guide future activities.

CCWPP Updates

The WFPEC will assess the need to update the CCWPP as part of its monitoring, project identification and reporting activities. Material changes to the CCWPP of a major and consequential nature will trigger a full reprint every 5 years. Alterations of a more transactional nature will be accomplished through memorandum or pen and ink in a fashion commensurate with the nature of the given update. In general, the WFPEC will keep the CCWPP current in consideration of ongoing activities, changing needs and available resources.

CHAPTER 10. CLACKAMAS COUNTY FIRE AGENCIES

Introduction

There are 14 local structural fire agencies and two wildland fire agencies in Clackamas County that have been identified as Communities at Risk in the 2005 CWPP. These organizations provide essential public services in the communities they serve, and their duties go beyond extinguishing fires. Most also provide emergency medical services (EMS), search and rescue, and fire prevention education.

Wildfire prevention and response efforts are most effective at the local level. One of the primary goals of the 2005 CCWPP was to create the foundation and build capacity for local fire agencies to create Community Wildfire Protection Plans that reflect the localized hazards, needs and mitigation strategies. However, the majority of fire agencies have not had the time or resources to invest towards this effort.

For this reason, the 2012 CWPP Update focused on taking a more localized approach to wildfire planning by creating individual CWPP's for each fire agency. Each fire agency was interviewed by ODF to identify and document issues regarding wildfire hazards, emergency operations, structural ignitability, community outreach and education and fuels reduction priorities. Fire agency representatives were also asked to identify Local Communities at Risk, or areas that are particularly vulnerable to wildfires. Fire agencies also provided input on larger county-wide issues to be addressed by the 2012 CCWPP.

Local CWPP Content

Each CWPP includes a brief description of the issues identified during fire agency interviews, and are complete with action plans to address wildfire issues specific to the agency and the Local Communities at Risk. Maps illustrating the locations of the Local Communities at Risk and Fuels Reduction priorities have been included as well. The goal of the CWPP's is to provide a guide for fire agencies to address wildfire hazards as staff and funding are available. The information gleaned from the following pages can also be used to identify commonalities/discrepancies between fire agencies, which can help direct wildfire mitigation efforts at the county level.

Components of Local CWPP's

- Fire Agency Description
- WUI Description & Map
- Hazard Assessment (Map #10: Overall Wildfire Risk in Clackamas County)
- Description of Wildfire Issues: Emergency Operations, Structural Ignitability, Community Outreach and Education and Fuels Reduction
- Local Communities at Risk Description and Map
- CWPP Action Plan & Fuels Reduction Priorities

Maintenance and Monitoring

In order to have a comprehensive and effective wildfire plan, it is critical to address county-wide and local issues simultaneously. Fire agencies will provide updates to the Wildfire Planning Executive Committee as actions and projects are completed or identified to ensure that these efforts are being coordinated and that partners are aware of potential opportunities for collaboration.

10.1 Community at Risk: Aurora Rural Fire Protection District #63

The Aurora Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Aurora Fire District Description

The Aurora Rural Fire Protection District #63 is a full-service fire and rescue agency with a force of 4 career employees, 42 volunteer firefighters and 6 resident student firefighters who serve the District's 6,000 citizens from 2 fire stations. The District organized on May 4, 1948 with 26 volunteer firefighters. It is a special service district that serves residents of Marion County and Clackamas County and is governed by a board of five publicly elected officials.

Wildland Urban Interface (WUI)

The Aurora Fire District has areas that are excellent examples of the Wildland Urban Interface (WUI). These areas are characterized by residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Heavy and continuous fuels dominate this area, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Aurora Fire District.

Aurora Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Aurora Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Aurora Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Aurora Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. However, the District does not always have the opportunity to provide input regarding access and water supply for new development. Using the State Fire Code as a regulatory tool in establishing adequate access and water supply is critical to reducing structural ignitability. The need for Aurora Fire to increase capacity for participating in land use reviews to provide input of new development is identified as an action item in the Aurora CWPP Action Plan.

Emergency Response

A major wildland urban interface fire in Aurora would quickly exceed the resources and capabilities of the District. For this reason, Aurora Fire has Mutual Aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires. Aurora Fire employees and volunteers receive somewhat regular wildfire training. The District would like to work with ODF to support regular the S-130 and S-190 training.

In the event of a large widlland fire, evacuations may be necessary. Evacuating this rural area safely does present some safety challenges due to the large number of one way in and one way out roads and bridges. Burning of agricultural waste and yard debris is a very common occurrence in this area that is dominated by agriculture. Aurora residents would benefit from periodic reminders of safe burning practices and techniques to ensure that debris burns do not escape.

Community Outreach &Education

Aurora Fire is dedicated to fire prevention, and uses a variety of forums to promote residential fire safety, defensible space, and safe burning practices. The community is very supportive of the Fire District and participates in activities throughout the year, some of which include smoke detector, fire prevention and other programs. Aurora Fire is also an active member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections and community and school programs.

Local Communities at Risk (Strategic Planning Areas)

Aurora Fire recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local level. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as Local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map#14 and are listed in Table 10.1-1. Aurora Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Effective fuels reduction projects include the creation of defensible space around homes as well as vegetation treatments (shaded fuels creaks, thinning, limbing) onto adjacent forested land and natural areas. To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Aurora Fire (Map #15).

Fuels Reduction Priorities include:

Champoeg State Park	Whiskey Hill
Eilers Road Area	Butteville Road

Aurora Fire District Action Plan

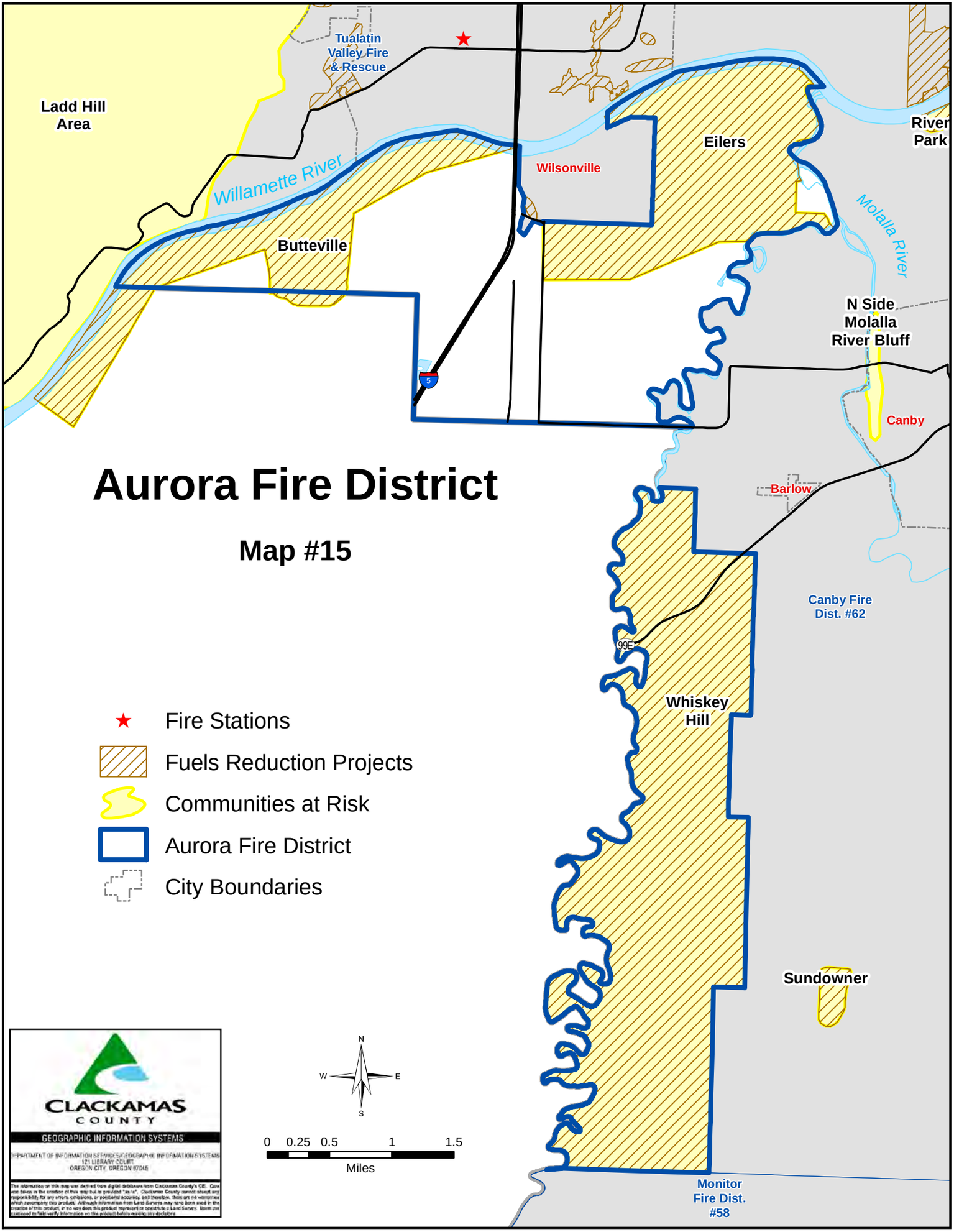
Aurora Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Aurora Fire and the Local CARs therein is provided in Table 10.1-2.

Table 10.1-1 Aurora Fire Local Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Aurora Fire Communities at Risk													
Eilers Road/ Myley Road near Charbonneau, Brownsdale Farm Road, Glass and Beck Roads	High	X	X	X						X		X	This community is characterized by many homes surrounded by heavy timber, poor access, and limited water supply. Brownsdale Farm Road and Mylee Road are very difficult for emergency service vehicles to access. This area also needs to be targeted for address signs.
Butteville Road	High	X		X						X		X	This is a fairly new community that has a high concentration of homes adjacent to heavy timber, and steep slopes. Access is good, but water supplies are limited. Defensible space is needed.
Whiskey Hill/ Meridian Rd.	High	X	X	X						X		X	Whiskey Hill is a high priority community at risk because there are homes adjacent to heavy timber, there are steep slopes, little water and access is extremely limited.
Cedarbrook Lane	High	X		X						X		X	Cedarbrook Lane is in a gully, which means that a fire here can carry upslope very quickly. Although access is good, address signs are needed here. Water supplies are also limited.

Table 10.1-2. Aurora Fire Action Plan

Action Item	Timeframe	Partners	CAR
Aurora Fire Action Plan			
Develop relationships with Clackamas County Sheriffs office for potential evacuations.	Short term	CCSO, CCEM	Aurora Fire District
Increase capacity for communicating with other fire agencies by obtaining 3-4 portable 800 MHz radios.	Short term	CCEM, CCFDB	Aurora Fire District
Work with Marion County to update map numbers.	Long Term	Marion County	Aurora Fire District
Work with Clackamas County Land Use Planning and Building Depts. to provide input on access and water requirements in new development.	Short Term	CCDTD	Aurora Fire District
Partner with ODF to assist training staff and volunteers in wildland fire initial attack (S-130 and S-190).	Short Term	ODF	Aurora Fire District
Aurora Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate the community and solicit feedback on wildfire prevention projects the community would support.	Ongoing	ODF	Eilers Road Area, Buttevile Road, Whiskey Hill,Cedarbrook Lane
Complete home addressing in Communities at Risk.		ODF, Fire Co-op	All; Eilers Road and Meridian Road
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	Short-Term	ODF, DEQ, Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All CAR's
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in Communities at Risk.	Ongoing	ODF	All CAR's
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	CCEM, CCFDB	All CAR's
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF	All CAR's
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All CAR's
Conduct Community Clean Up Days to reduce hazardous fuels. Identify opportunities to recycle or compost vegetative material instead of burning.	Ongoing	ODF	All CAR's



Aurora Fire District

Map #15

10.2. Community at Risk: Boring Rural Fire Protection District # 59

The Boring Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Boring Fire District Description

The Boring Fire District is a special service district that provides fire, rescue, and prevention services to the City of Damascus, as well as the unincorporated areas of Boring, Kelso, Hillsview, Barton and Eagle Creek. Over 20,000 people live within the 64 square miles that the District serves. Currently, the Fire District has 83 members, consisting of 18 career, 55 volunteer, 8 support, and 2 administrative personnel.

Boring Fire District encompasses over 64 square miles in northern Clackamas County. There are three stations located in the District: the Boring Station, Damascus Station and the Eagle Creek Station. These stations are equipped with combinations of engines, water tenders, brush trucks, squad, and several staff vehicles that enable Boring Fire to respond to calls, which averages approximately 1600, annually.

Wildland Urban Interface (WUI)

Some areas in the Boring Fire District are excellent examples of the Wildland Urban Interface (WUI). These areas are characterized by residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Heavy and continuous fuels dominate this area, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Boring Fire District.

Metro and Clackamas County have a few heavily forested landholdings adjacent to homes in the WUI. The County has managed the forestland adjacent to Madrone Wall for many years. However, the community has expressed concern over timber management in this natural area and it is now slated to be converted to a County Park. The County Parks Wildfire Management Plan identified Madrone Wall as a priority for fuels reduction work which was completed in Spring of 2012.

Metro owns forested land adjacent to the Damascus Lava Domes and Bartell Road communities. As Boring Fire targets these areas for creating defensible space, there is an opportunity to engage Metro in reducing fuels on this adjacent public land. This has been identified as an action item.

Tourism and recreation are also major influences here, as thousands of Portland area residents travel along Highway 26 to access the Mount Hood National Forest. Campers, hikers, hunters and other visitors to this area can potentially start wildfires that could carry from public land to the residential communities.

Boring Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Boring Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Boring Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Boring Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Boring Fire works well with the City of Damascus and Clackamas County to integrate these concepts at the regulatory level. For example,

the City of Damascus has an Urban Tree Ordinance which includes exemptions for removing trees that threaten or are within 30 feet of structures. Boring Fire participates in land use reviews for new development to provide input on access and water supply.

Emergency Response

A major wildland urban interface fire in Boring would quickly exceed the resources and capabilities of the District. For this reason, Boring Fire has Mutual Aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

In the event of a large widlland fire, evacuations may be necessary. Although Boring Fire has been working with Damascus to plan for potential evacuations, this rural area presents some difficulties due to the large number of one way in and one way out roads.

Burning of yard waste and debris is challenging in the Boring Fire District because the agencies that have regulatory authority over burning (DEQ and ODF) dissect the District, so different rules apply to residents throughout the District. Backyard burning is allowed in all areas. Boring Fire adheres to the Open Burn Policy adopted by the Fire Defense Board and tries to be consistent with neighboring jurisdictions in regulating the Backyard Burning program.

Boring Fire employs 18 career and 55 volunteer firefighters who receive regular wildland fire training to remain current on qualifications. Although the District is able to support the S-130 and S-190 training, lack of hands-on fire experience makes it difficult to retain wildland qualifications. Boring Fire would like to work more directly with the USFS and ODF to have opportunities to participate in live fires, and this is noted in the action plan.

Community Outreach & Education

Boring Fire is dedicated to fire prevention, and uses a variety of forums to promote residential fire safety, defensible space, and safe burning practices. The community is very supportive of the Fire District and participates in activities throughout the year, some of which include smoke detector, fire prevention, car seat, and Christmas Basket programs. Boring Fire is also an active member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, community and school programs, and fire safety house displays.

Boring Fire worked with Clackamas County Parks and Oregon Department of Forestry to hold a public meeting regarding the CWPP and wildfire issues in the Madrone Wall Area Community at Risk. The purpose of this meeting was to educate local area residents about the upcoming fuels reduction project planned for the County-owned forest land north of Madrone Wall and to educate them about how to protect their homes from potential wildfires. Sixteen people attended, including many who live outside of the boring Fire District. People were generally supportive of the fuels reduction project and suggested that the surrounding homeowners be contacted to create defensible space around their homes.

Local Communities at Risk (Strategic Planning Areas)

Boring Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as

being particularly vulnerable to wildfires are illustrated in Map #16 and listed in Table A-2.1. Boring Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Effective fuels reduction projects include the creation of defensible space around homes as well as vegetation treatments (shaded fuels creaks, thinning, limbing) onto adjacent forested land and natural areas. Boring Fire will facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Boring Fire (Map #16).

Fuels Reduction Priorities include:

Hwy 224 Corridor/Madrone Wall Area	Tickle Creek Road
Amisgger Road	Bartell Road
Gold, Bronze, Nickel Creek	Eagle Fern Park

Boring Fire District Action Plan

Boring Fire has developed a list of actions to build capacity at the District scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Boring Fire and the local CARs therein is provided in Table10.2-2.

Table 10.2-1. Boring Fire District Local Communities at Risk

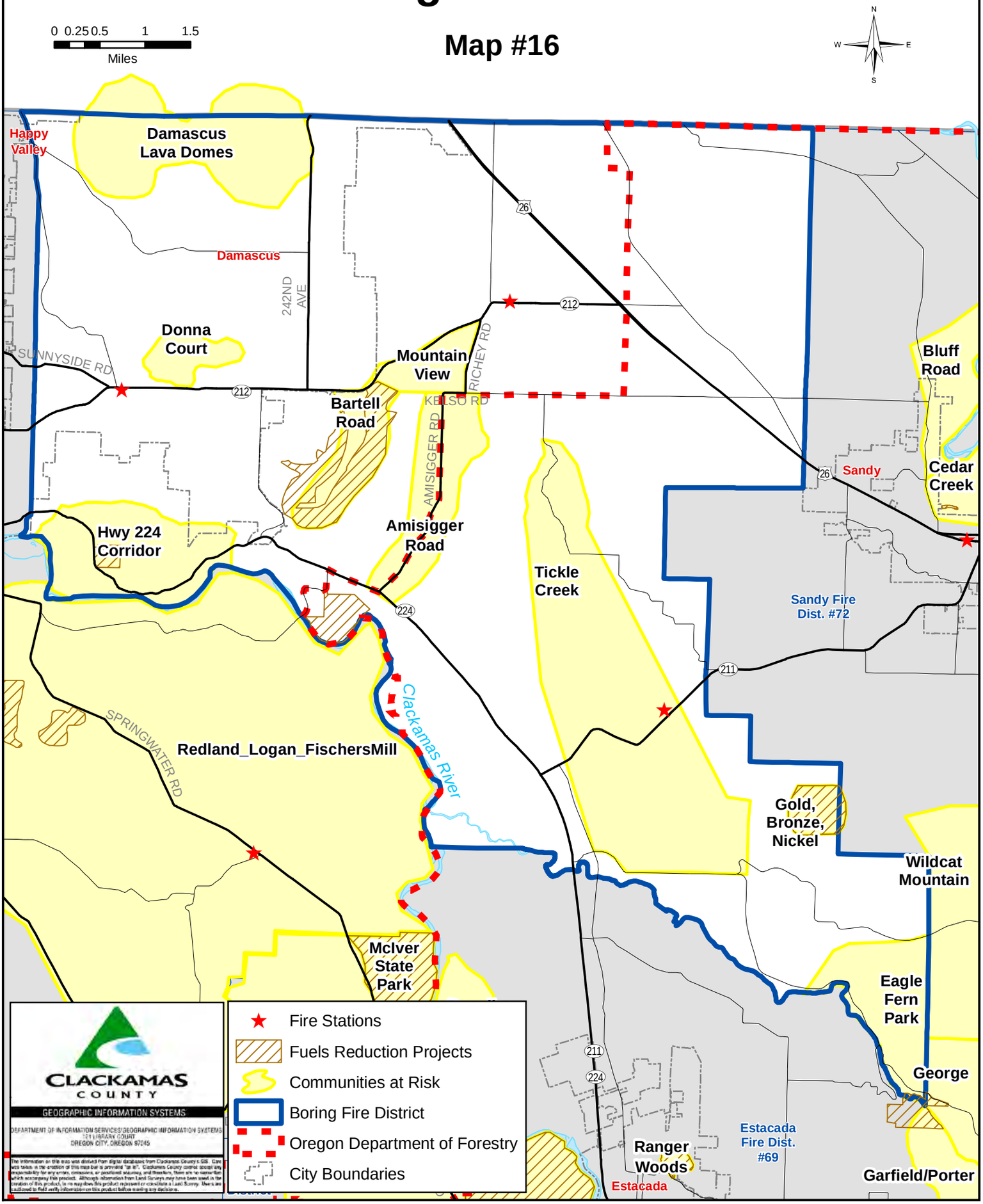
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Boring Fire Communities at Risk													
Eagle Creek	**High**	X	X	X		X		X	X	X	X	X	The Eagle Creek area is a steep forested ravine which make access, communication and potential firefighting operations difficult. Boring Fire has a volunteer station closely and Sandy Fire is also close, but there will likely be a delay in response time.
Damascus Lava Domes	**High**	X	X	X	X	X		X	X	X	X	X	There are two lava domes on the north end of Damascus, which present a variety of wildfire issues. The western dome is home to the Wooded Hills Court residential community, and the eastern dome is the Kingswood Heights community. Both are characterized by large homes adjacent to dense vegetation along steep slopes. There is only one way in/out here, the driveways are long and narrow, and hydrants are on a private system that will provide water only for the short term. Metro owns part of the natural area that extends to the north into neighboring Multnomah County. This area has also been identified at a CAR in the Multnomah County CWPP.
Gold, Bronze, Nickel Area	**High**	X	X	X	X	X		X	X	X	X	X	This CAR has about 20-30 homes with steep, narrow, gravel driveways. The area is bordered by BLM forested land. There is no garbage service in this area, so many people burn garbage as well as woody debris. Wagner Lake is a potential water source here and ODF is currently working on a draft site here.
Eagle Fern Park	**Low**		X		X		X	X			X	X	This County park is a mature fir forest exhibiting desirable conditions. There are no homes nearby, it is north-facing and remains wet throughout the year.
Amisigger Road	**Medium**	X	X						X	X	X	X	The Amisigger Road area is home to a number of nurseries and other agricultural operations. Many of the ag operators burn their agricultural waste as well as dead and dying trees on their land. Tree Rot seems to be a big problem here. This road connects Hwy 212 and Hwy 224, so it could serve as a critical transportation route and fire break in the event of a wildfire.
Tickle Creek Road	**Medium**	X		X		X		X	X	X		X	Tickle Creek Road has quite a few homes. Many homes are surrounded by dense vegetation, and there are some actively managed forest lands here, which can provide an ignition source. The area is surrounded by agriculture and burning is an issue here.
Hwy 224 Corridor (232nd to Madrone Wall)	**High**	X	X	X	X	X	X	X	X	X	X	X	There have been many fires along Hwy 224 from power line ignitions, escaped debris burns and lightning. Madrone Wall and the surrounding forestland is owned by the County as in the process of transitioning from managed forestland to a park. Dense young and mature Doug Fir dominates the landscape. There are a couple of homes at the top of the slope above the forest. the County has developed a wildfire management plan for this area and plans to complete some fuels reduction work here by Sept. 2012.
Mountain View	**High**	X	X	X				X	X	X		X	This community is on the slope of Noyer Creek. Access and water are limited here. A primary issue in this community is that there are many decadent trees that fall, but the residents must adhere to the residential burning restrictions.
Bartell Road	**High**	X	X	X	X	X	X	X	X	X		X	Bartell Road had a significant wildfire in 1952. It is along the ridge of two steep, heavily vegetated ravines. There is only one way in and out and there are no available water sources. Metro has a trail in this area.
Donna Court	**High**	X	X	X	X	X		X	X	X		X	This community is on a lava dome with access limited to one way in and out. Burning is an issue here, with a history of escaped debris burns.

Table 10.2-2. Boring Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Boring Fire Action Plan			
Develop a working relationship with Metro, USFS and the BLM to address wildfire hazards and potential response capabilities for public lands adjacent to Communities at Risk.	Short-Term	Metro, USFS, BLM	Boring Fire District
Work with the City of Damascus, and Clackamas County Emergency Management and Sherriff's Office to discuss evacuation planning especially in communities with only one way in and out.	Long Term	City of Damascus, and Clackamas County Emergency Management Sherriff's Office	Boring Fire District
Work with Clackamas County Building Dept. to include line items for access and fire flow in occupancy permit checklist.	Short-Term	Clackamas FDB, DTD	Boring Fire District
Boring Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability. Solicit feedback on wildfire prevention projects the community would support.	Spring 2012/ Ongoing	ODF, Clackamas County Parks	Madrone Wall/ Hwy 224 Corridor
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	Short-Term	ODF, DEQ, Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Damascus Roads Dept., Clackamas County Roads	Tickle Creek Rd., Amisigger Road, Hwy 224, Bartell Road
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in Communities at Risk.	Ongoing	ODF	All CAR's
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All CAR's
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF	All CAR's
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All CAR's
Work with Metro to reduce fuels adjacent to CAR's.	Ongoing	Metro	Damascus Lava Domes, Bartell Road
Work with BLM to reduce hazardous fuels adjacent to CAR's.	Ongoing	BLM	Gold, Bronze Area
Work with Clackamas County to reduce hazardous fuels in parks and forested areas adjacent to CAR's.	Ongoing	Clackamas County Parks & Forestry	Madrone Wall, Eagle Fern
Conduct Community Clean Up Days to reduce hazardous fuels. Identify opportunities to recycle or compost vegetative material instead of burning.	Ongoing	ODF, Metro	All CAR's
Partner with ODF and the SWCD to provide education to agricultural landowners regarding sick and/or dying tress and potential methods of disposal such as chipping and composting.	Ongoing	ODF, SWCD	Amisigger Road, Mountain View

Boring Fire District

Map #16



10.3. Community at Risk: Canby Rural Fire Protection District # 62

The Canby Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Canby Fire District Description

The Canby Fire District is a special service district that provides fire, rescue, and prevention services to the Cities of Canby and Barlow as well as the rural areas around those cities. Canby Fire is also the ambulance service provider for the service area, providing emergency advanced life support transport to its citizens. Over 30,000 people live within the 54 square miles that the District serves. Currently the Fire District has 50 members who consist of 18 career, 30 volunteer, and 2 administrative personnel.

Wildland Urban Interface (WUI)

Some areas in the Canby Fire District are excellent examples of the Wildland Urban Interface (WUI). These areas are characterized by residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Canby has a heavy agricultural influence, so there is a great deal of controlled field burning, but there is not a significant history of large wildfires.

Canby Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Canby Fire in identifying areas that may be at higher risk to potential wildfires. Map # 10 illustrates the overall wildfire hazard risk in the Canby Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Canby Fire promotes adequate access and water supply, the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Although the City of Canby has a Planning Department, it now contracts with Clackamas County for land use planning and building permit services. Canby Fire has an excellent working relationship with Clackamas County and integrates fire-safety concepts at the regulatory level by participating in land use reviews for new development to provide input on access and water supply.

Emergency Response

A major wildland urban interface fire in Canby would quickly exceed the resources and capabilities of the District. For this reason, Canby Fire has mutual aid agreements in place which allows for the sharing of resources across the county during a large scale disaster such as a wildfire.

Burning of yard waste and debris is challenging in the Canby Fire District, as the majority of wildfire ignitions are the result of escaped debris burns from agricultural lands. Agricultural burning is regulated by the Oregon Dept. of Agriculture, and fire districts may only ban burning if certain humidity, temperature and wind conditions are met. Agricultural operations may burn all year, which makes enforcement of the backyard burning program difficult because local area residents do not understand why they cannot burn while others can. The majority of Canby is within the DEQ boundary, so there is a burning season, but response from DEQ for violations is inconsistent.

Radio communications is good throughout Canby, although there are some gaps in coverage across the District. Canby Fire recently received an AFG large grant to address communication issues in these areas. Canby Fire would rely on two primary water supplies for wildfire response: one on Dryland Road; and one on Elisha Road. The Canby Ferry also has a fire pump that could be utilized in an emergency. Canby Fire would like to continue developing rural water supply sources for the rural areas to in order to be recognized water supply by ISO.

The District employs 18 career and 30 volunteer firefighters who receive regular wildland fire training to remain current on qualifications. Although the District is able to support the S-130 and S-190 training, lack of live fire experience makes it difficult to retain wildland qualifications. Canby Fire is working with NAFT and WFTA to conduct a live fire exercise (potentially in Molalla area) to address fire component of wildland task books. Canby Fire recently received grant for purchasing wildland PPE, and received a Fire Act FEMA grant for structural and wildland PPE five years ago, but likely will need additional wildland gear (turnouts and footwear) due to volunteer turnover.

Community Outreach & Education

Canby Fire is dedicated to fire prevention, and uses a variety of forums to promote residential fire safety, defensible space, and safe burning practices. The community is very supportive of the Fire District and participates in activities throughout the year, some of which include in-classroom school programs , public presentations, fire station tours , media events, and safety fairs. Canby Fire is also a member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, and fire safety house displays.

Local Communities at Risk (Strategic Planning Areas)

Canby Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #17 and listed in Table 10-3.1. Canby Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Canby Fire will assist in facilitating cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Boring Fire (Map #17).

Fuels Reduction Priorities include:

Sundowner
Molalla River State Park

Canby Fire District Action Plan

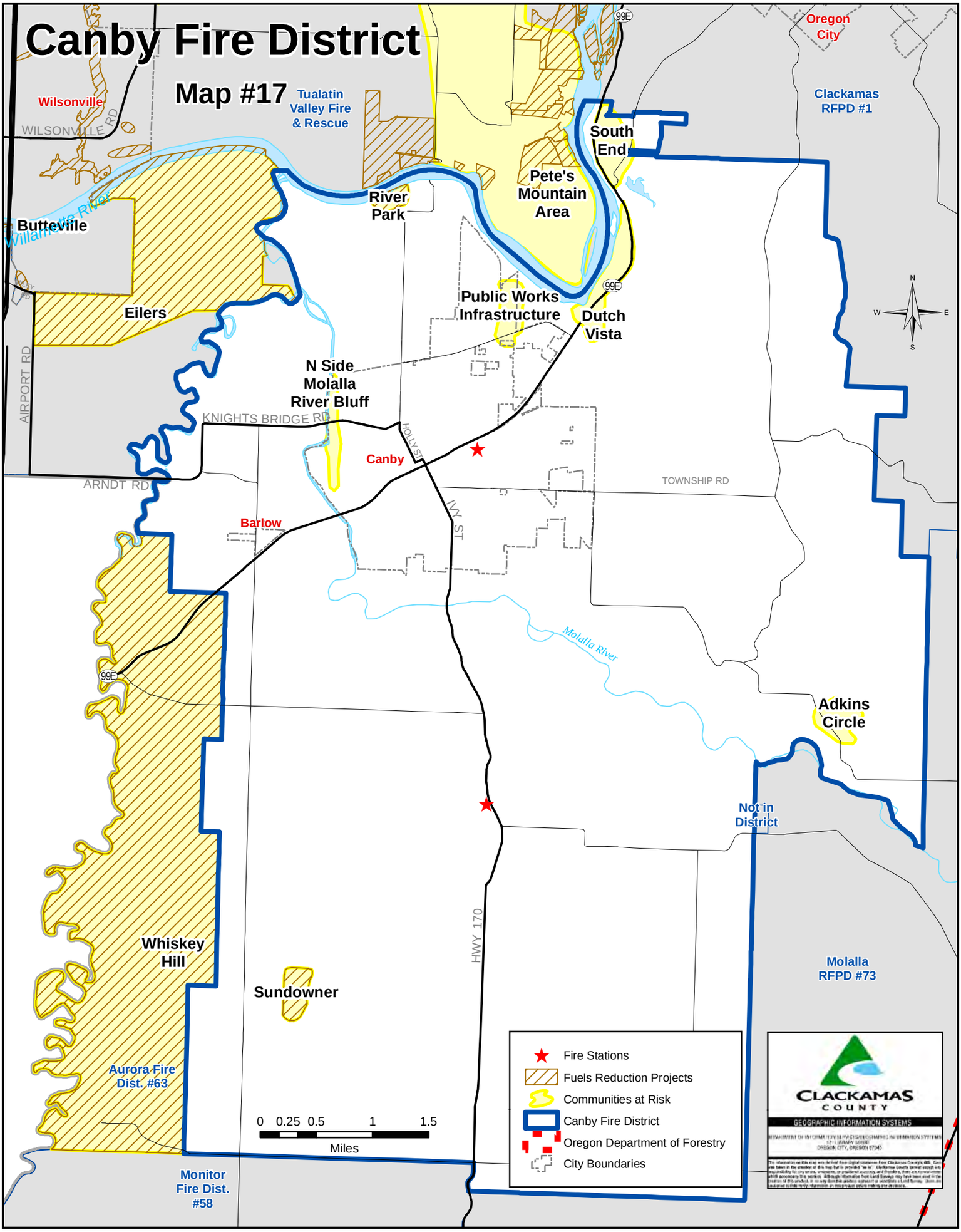
Canby Fire has developed a list of actions to build capacity at the District scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Canby Fire and the local CARs therein is provided in Table 10.3-2.

Table 10.3-1. Canby Fire District Local Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Canby Fire Communities at Risk													
Adkins Circle	High	X	X	X		X			X	X		X	Adkins Circle is a community of about 11 homes that have a single access bridge which is one way in and out . The community is adjacent to managed private timberlands. The area has steep slopes and residents regularly burn yard debris.
Sundowner	High	X	X	X				X	X	X			The Sundowner community is very rural and it would take over 10 minutes to respond, making it very important for landowners to be prepared for potential emergencies such as wildfires. There is only one way in and out. The homes here are relatively new and have heavy vegetation leading up to the homes. Residents regularly burn yard debris in this community.
Dutch Vista / Madrona	High	X	X	X			X	X	X	X		X	The Dutch Vista One has limited access with a steep, one way in and out road. The homes are on the bluff of the river, which is accessed by recreators and fishermen who could serve as ignition sources. There is also a railroad here, which is a potential ignition source. Water supply is very limited.
Public Works Infrastructure	High	X	X	X	X								The City of Canby Public Works buildings and other infrastructure are adjacent to city owned forest that would benefit from fuels reduction. Access is limited to one way in and out.
North Side Molalla River Bluff	Medium	X		X					X	X		X	The homes on the North Side of the Willamette River Bluff are at the top of a heavily vegetated slope. There are good potential evacuation routes in this area because there many points of entry, However, this increased access to the area also increases the number of recreators and fishermen that could serve as ignition sources.
South End	Medium	X		X			X	X		X		X	South End Road has adequate access, but a limited water supply. CCFD#1 has a few hydrants here. Vegetation and steep slopes are the primary concerns here. Fire response would have to be staged off the main hwy, so there would be disruption, and traffic management to consider. The railroad runs through here, which increases ignition potential. Anglers, transients, and recreators frequent the area and are potential ignitions sources.
Molalla River State Park	Medium	X	X		X					X		X	The Molalla River State Park draws many recereators, and anglers to the area. The primary risk here is the heavy fuels loading throughout the park.

Table 10.3-2. Canby Fire Action Plan

Action Item	Timeframe	Partners	CAR
Canby Fire Action Plan			
Pursue grant funding to purchase Wildland PPE to replace outdated PPE.	2 Years	FDB, ODF	Canby Fire District
Develop rural water supply sources to a standard that will be recognized by ISO.	Long-Term	ODF, FDB	Canby Fire District
Work with the ODA to educate local area residents about the differences in agricultural burning in and backyard burning. .	Long-Term	ODF, DEQ, Fire Co-op	Canby Fire District
Work with the DEQ to achieve consistent responses for burning violations.	Long-Term	DEQ	Canby Fire District
Identify and pursue opportunities to participate in prescribed burns and live fire training to update and maintain wildfire certifications.	Ongoing	FDB, NAFT, WFTA	Canby Fire District
Continue to foster partnerships with natural resources managers to assess and implement potential fuels reduction projects in natural areas adjacent to Communities at Risk.	Ongoing	BLM,ODF, Parks	Canby Fire District
Partner with the Clackamas County Fire Defense Board to participate in a WUI conflagration exercise.	2 Years	Clackamas Fire Defense Board	Canby Fire District
Canby Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability.	2 Years	ODF	Adkins Circle
Improve address signage for emergency response.	Ongoing	Fire Co-op	All CAR's
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	Ongoing	ODF, DEQ,ODA, Fire Co-op	All CAR's
Encourage communities to develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All CAR's


Canby Fire District
Map #17
Wilsonville
Tualatin Valley Fire & Rescue
WILSONVILLE RD
Oregon City
Clackamas RFPD #1
South End
Pete's Mountain Area
River Park
Butteville
Willamette River
Eilers
Public Works Infrastructure
Dutch Vista
99E
N
W
E
S
AIRPORT RD
N Side Molalla River Bluff
KNIGHTS BRIDGE RD
HOLLY ST
Canby
ARNDT RD
TOWNSHIP RD
Barlow
IVY ST
Molalla River
Adkins Circle
Not in District
HWY 170
Whiskey Hill
Sundowner
Molalla RFPD #73
Aurora Fire Dist. #63
Monitor Fire Dist. #58
0 0.25 0.5 1 1.5
Miles
Fire Stations
Fuels Reduction Projects
Communities at Risk
Canby Fire District
Oregon Department of Forestry
City Boundaries
CLACKAMAS COUNTY
GEOGRAPHIC INFORMATION SYSTEMS

10.4. Community at Risk: Clackamas Fire District #1

Clackamas Fire District #1 (CFD#1) has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Clackamas Fire District #1 Description

Clackamas Fire District #1 (CFD#1) is one of the largest fire protection districts in Oregon, proudly serving over 179,000 citizens in an area covering nearly 200 square miles. The District provides fire, rescue, and emergency medical services to the cities of Milwaukie, Oregon City, Happy Valley, and Johnson City, and the unincorporated areas of Oak Lodge, Clackamas, Sunnyside, Redland, Carver, Beavercreek, Highland and Clarkes.

CFD#1 has 17 fire stations strategically located throughout Clackamas County with a workforce of more than 200 employees & 70 volunteers and is the second largest fire protection district in Oregon, serving over 179,000 citizens in an area covering nearly 200 square miles. CFD#1 firefighters/paramedics respond to over 16,500 incidents annually throughout the fire district. Clackamas Fire District #1 is an internationally accredited agency meeting the highest standards in emergency service delivery.

Wildland Urban Interface (WUI)

Many areas covered by CCFD#1 excellent examples of the Wildland Urban Interface (WUI). They are characterized by suburban communities and rural residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor water supply.

The more rural wildland urban interface areas exist in the Fire District's southeast protection service areas. These rural interface areas are best defined as a mixed interface in which small to medium sized neighborhoods have been built on lands formerly used for a variety of farm use applications.

In the more urban areas, heavy and continuous fuels dominate many of the parks and natural areas surrounding the communities, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the cities of Clackamas, Milwaukie, Oak Lodge, Happy Valley and Oregon City. In addition, response times from rural fire stations could be delayed, which underscores the need for community preparedness in the wildland urban interface.

Clackamas Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Clackamas Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Clackamas Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

CFD#1 promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. CFD#1 works well with the Cities of Milwaukie, Oregon City, Happy Valley, and Johnson City and Clackamas County to integrate these concepts at the regulatory level by participating in land use reviews for new development to provide input on access and water supply.

The area served by CCFD#1 has a great deal of development in urban areas, making it difficult to make specific recommendations and make site visits to confirm compliance with the guidelines set forth in the ZDO. This need to build capacity for rural development is included in the CFD#1 Action Plan.

Emergency Response

A major wildland urban interface fire in CFD#1 may exceed the immediate resources and capabilities of the District. For this reason, CFD#1 has mutual aid agreements in place to allow for the sharing of resources across the county in the event of a large scale disaster including wildfires.

In the event of a large widlland fire, evacuations may be necessary. The rural residential areas present some challenges for evacuations due to access constraints including long, narrow and steep driveways with poor addressing. CCFD#1 has been working with ODF to improve address signage in vulnerable areas, and will continue to work with the Clackamas County Fire Co-op to implement address signage in the Communities at Risk. Many of the identified communities at risk have only one point of egress, making it difficult to manage incoming and outgoing traffic during an emergency.

CFD#1 follows DEQ burning policies for backyard burning. The majority of the cities covered by CFD#1 are within the DEQ burn ban area, which does not allow backyard burning at any time of the year. In the more rural areas that allow burning, CFD#1 tries to be consistent with debris burning policies set forth by the Fire Defense Board during fire season.

Clackamas Fire employs over 200 career and70 volunteer firefighters who receive regular wildland fire training to remain current on qualifications. Although the District is able to support classroom training, lack of live- fire experience makes it difficult to maintain wildland qualifications. New staff members have little to no live-fire experience have difficulty completing task books without being deployed. For this reason, CCFD#1 has been working with NAFT to identify opportunities for prescribed burns in Clackamas County that would benefit native ecosystems while providing live-fire experience to CFD#1 staff.

Community Outreach & Education

Clackamas County Fire District #1's Fire Prevention Division's mission is to protect and preserve life and property through education, engineering, and enforcement which requires proactive community interaction. Education opportunities include; school programs, public presentations, media events, and safety fairs. Engineering activities include; pre-construction plans review, fire protection system review, consumer product data collection, and fire code development. Enforcement activities include; commercial fire code inspections, open burning regulation enforcement, fire cause determination and arson investigation, and juvenile fire setter counseling and follow-up.

CCFD#1 is also a member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, community and school programs, and fire safety house displays.

In addition, Clackamas Fire worked with Clackamas County (North Clackamas Parks and recreation District) to hold a community meeting in conjunction with the Clackamas County Parks Wildfire Management and Implementation Plan on February 7th, 2012. More information can be found in the *Clackamas County Parks Wildfire Management Plan*.

Local Communities at Risk (Strategic Planning Areas)

Clackamas Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #18 and listed in Table 10.4-1. Clackamas Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

The Bureau of Land Management, private industrial landowners and small woodland owners have many heavily forested landholdings that are adjacent to homes in the WUI. As CFD#1 targets the residential communities for creating defensible space, there is an opportunity to engage private, state and federal partners in reducing fuels on this adjacent public land.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Clackamas Fire (Map #18). Fuels Reduction Priorities include:

Billy Goat Island	Ella V. Osterman
Happy Valley nature Trail	Highland Summit
Mt Talbert	Three Creeks
Willamette Narrows	Mtn. View Cemetery
Singer Creek Park	Atkinson Park
Waterboard Park	Canemah Bluff
Clear Creek	Newell Invasives
Scouter Mountain	Mciver Park
Lower Highland & Ridge	East Highland
Spring Park	Forest Creek

Clackamas Fire District Action Plan

Clackamas Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Clackamas Fire and the local CARs therein is provided in Table 10-4.2.

Table 10.4-1. Clackamas Fire District #1 Local Communities at Risk

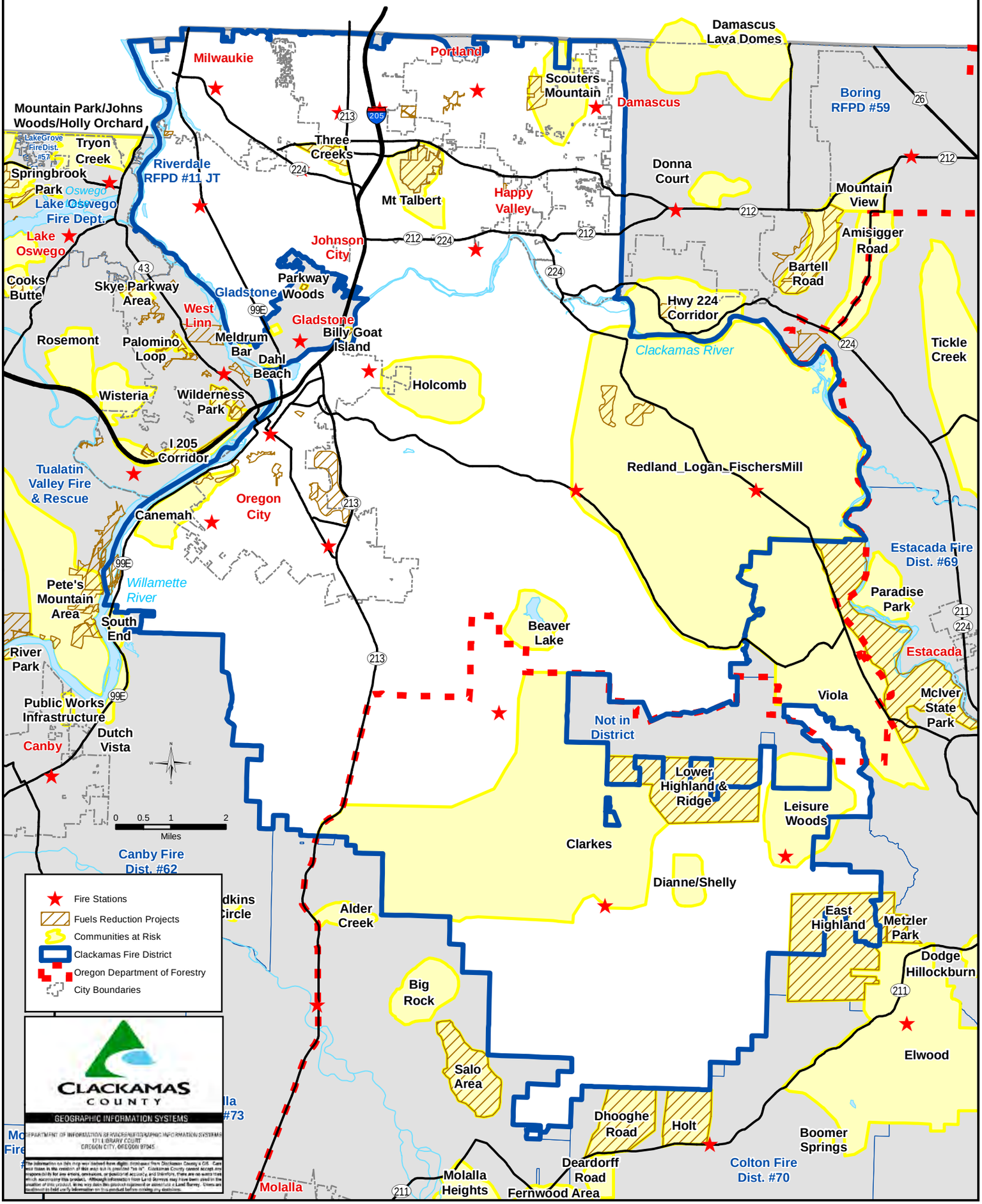
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Clackamas Fire District #1 Communities at Risk													
Forest Park/ Leisure Woods	High	X	X	X		X	X		X		X	X	This community is a high priority for CCFD#1 because it has only one way in one way out, it is surrounded by managed timberlands (Port Blakely and BLM), there is poor access into the forested areas and it is heavily used by bicycles in the summer. Access for response is extremely limited. Burning on residential and forested lands is an issue. The is a strong need for community awareness and preparedness as many homes have cedar shake roofs. . There is very poor cell coverage, limited water, and delayed response times.
Diane Drive Shelly Road	High	X		X		X		X	X		X	X	There are large homes adjacent to commercial timber operation in this community. Active timber management can provide ignition sources. Some of the homes have defensible space, and most of construction is good with fire resistive roofing. However, it is steep, and there are many slash piles surrounding the community, so embers encroaching would be an issue. There is no water here and the closest station is volunteer, so response times would be delayed.
Redland Road/Fishers Mill area/Logan	High	X	X	X		X	X		X	X		X	Logan Road is characterized by many logging operations than include burning of material. CCFD#1 has had many responses to fire ignitions here. Access is very poor access off of Eden. Water is limited to draft sites.
Clarkes/Beavercreek	High	X	X	X		X			X	X	X	X	There is a long history of larger and many widlfire ignitions in the Clarkes/Beavercreek area. The area now is densely populated with homes, but only about half have hydrants (towards Oregon City). Response times would be longer to this area and communications may being to be an issue . The community is also adjacent to Port Blakely forests that have heavy fuels loading ,
Beaver lake	High	X	X			X		X				X	Beaver Lake is a gated community adjacent to Port Blakely forest land The rear access is not accessible, so it is one way in and out. The community has heavy timber surrounding it and is on the top of a steep slope. CCFD#1 is in contact with the Port Blakely forester in case need to use their roads or need a key to unlock forest road gates.
Canemah Bluffs	High	X	X		X		X			X		X	Canemah Bluffs is very steep and has homes at the bottom and at the top of the slope. The homes at the bottom are surrounded by fine, flashy fuels. Access is limited here to one way in and out. A fuels reduction/oak restoration was implemented here.
Scouters Mountain	High	X	X	X	X	X	X		X	X	X	X	Scouters Mountain has a series of natural areas adjacent to homes and infrastructure. This has been identified in the Clackamas Parks Wildfire Management Plan as a priority for fuels reduction.
Mount Talbert	High	X	X	X	X		X			X		X	Mount Talbert Nature Park is a 242-acre property, co-owned by North Clackamas Parks and Recreation District and Portland Metro. The site is located east of I-205 and south of Sunnyside Road. The park has urban development at its edges on three sides. Surrounding properties are mostly medium density residential, with higher density residential and commercial uses to the north. It has steep slopes and has transient camps.
Holcomb	Medium	X				X			X				The primary issue with the Holcomb area is that there is a history of juvenile fire setters here. This ignition source coupled with steep slopes, heavy vegetation and lighter fuels in the open spaces could result in a rapidly spreading wildland fire.
3 Creeks	Medium	X	X	X	X		X			X			Three Creeks is a Clackamas County Park area that has heavy fuels adjacent to homes and infrastructure. This is a priority for fuels reduction and has been identified in the Clackamas County Parks Wildfire Management Plan.

Table 10.4-2. Clackamas Fire District # 1 Action Plan

Action Item	Timeframe	Partners	CAR
Clackamas Fire District #1 Action Plan			
Identify and pursue opportunities to participate in prescribed burns and live fire training to update and maintain wildfire certifications.	Ongoing	Metro, City of Wilsonville, City of West Linn, Clean Water Services, ODF	CCFD#1
Continue to foster partnerships with natural resources managers to assess and implement potential fuels reduction projects in natural areas adjacent to Communities at Risk.	Ongoing	Metro, City of Wilsonville, City of West Linn, Clean Water Services, ODF	CCFD#1
Partner with the Clackamas County Fire Defense Board to participate in a WUI conflagration exercise.	2 Years	Clackamas Fire Defense Board	CCFD#1
Build capacity to increase participation in lad use reviews of residential structures in the Timber/Agriculture Zone.	Long-Term	Clackamas DTD	CCFD#1
Use this CWPP to update the 2001 Clackamas County Fire District #1 Wildland/Urban Interface Fire Protection Plan	2 Years	ODF	CCFD#1
Clackamas Fire District #1 Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability. Consider creating Firewise/USA Communities here.	2 years	ODF	Forest Park/ Leisure Woods, Diane Drive Shelly Road
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	2 Years	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	Short-Term	ODF, DEQ, Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All CAR's
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in Communities at Risk.	Ongoing	ODF	All CAR's
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All CAR's
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF, Clackamas County Fire Co-op	All CAR's
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF, Clackamas County Fire Co-op	All CAR's
Work with Clackamas County to reduce hazardous fuels in parks and forested areas adjacent to CAR's.	Ongoing	Clackamas County North Clackamas Parks and Recreation District	Scouters Mountain, Mount Talbert
Conduct Community Clean Up Days to reduce hazardous fuels. Identify opportunities to recycle or compost vegetative material instead of burning.	Ongoing	ODF, Metro	All CAR's

Clackamas Fire District

Map #18



10.5. Community at Risk: Colton Rural Fire Protection District #70

Colton Rural Fire Protection District #70 has been identified as a Community at Risk (CAR) by the Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Colton Fire District Description

With over 50 years of tradition, the Colton Rural Fire District is made up of men and women (primarily volunteers), who serve the citizens of Colton. The Colton Rural Fire District was established in1956 and covers 46 square miles between Molalla and Estacada. Colton Rural Fire District protects the community with both Fire Service and Emergency Medical Care.

Wildland Urban Interface (WUI)

This area is an excellent example of the Wildland Urban Interface (WUI) because it is characterized by steep slopes with residential homes surrounded by heavy fuels. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Water is limited throughout the District, especially in the Communities at Risk.

Heavy and continuous fuels dominate this area, and forests are actively managed for lumber and Christmas trees. Land ownership includes a variety of rural residential, private forest land, large industrial forests and public lands (Bureau of Land management). There are also many small woodlands that are not actively managed that are littered with dead and dying trees and ladder fuels that could take a fire from the ground into the crowns of the trees. Many local youth illegally access these forest landholdings to build campfires, use All Terrain Vehicles (ATV's) which increases the likelihood of potential ignitions. Fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Colton Fire District.

Colton Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Colton Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Colton area and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Colton Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Colton Fire works with the Clackamas County Department of Transportation and Development to provide input on access and water supply for new lots of record. Colton Fire provides alternatives to property owners who cannot meet the requirements for access and water supply. There are some opportunities to improvements coordination between Clackamas County and Colton Fire. First, Colton Fire is not notified of development that occurs on existing roads and/or lots of record. Second, Colton Fire is not being notified of homes that are being remodeled that require new access and water requirements.

In addition, Colton Fire is not receiving notification of occupancy permits through monthly emails and does not have access/training in using the Velocity Hall system. Colton Fire is particularly concerned with about new developments such as the one on Rolliewood Road. As new homes are built, the District should be notified because no parking signs are required to be posted on all narrow roads.

Emergency Response

Emergency response is challenging in the Colton Fire District because staff are almost entirely volunteer, 1.5 paid staff. A major wildland urban interface fire in Colton would quickly exceed the resources and capabilities of the District. For this reason, Colton Fire has Mutual Aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

Although the District is able to support annual wildland fire training (S-130 and S-190), the lack of live fire experience makes it difficult to retain wildland qualifications. Colton Fire would like to work more directly with the USFS and ODF and other land mangers to take advantage of opportunities to participate in live fires.

Burning of yard waste and debris is unique in the Colton Fire District because it is outside of the DEQ boundary, which means that residents can burn throughout the winter. Colton Fire adheres to the Open Burn Policy adopted by the Fire Defense Board and tries to be consistent with neighboring jurisdictions in regulating the Backyard Burning program, but lack staff and resources make it difficult to catch every illegal fire.

Radio coverage is generally good throughout the District using VHF, but the equipment CCOM has for VHF is antiquated. It is not likely that CCOM will update their equipment because the federal deadline for county-wide narrowband by Jan. 1st 2013. Also, there is a county-wide migration to 800 MHz, which presents issues in rural areas where VHF works much better than 800 MHz. (county-wide issue).

Colton Fire has not been successful in acquiring RFA and VFA grants to purchase widland PPE (nomex shirts, pants and fire shelters), and is in need of new PPE including the new fire shelters.

Because Colton Fire has does not have an extensive hydrant system, it is important to begin identifying and improving potential water sites. This is especially important for homes that have long narrow driveways that will not support water tenders. ODF has been working with Colton Fire to improve address signage in the many of the most vulnerable areas and potential water sites could be added to these signs.

Community Outreach & Education

Colton Fire is dedicated to fire prevention, and uses a variety of forums to promote defensible space, fire-resistant building materials, and safe burning practices. Colton Fire partners with ODF to have wildfire prevention programs in local area schools. The District also holds annual events at the main fire station that are paired with prevention messages. The District would like to be more proactive about educating the public about the need for access, water and defensible space and plans to partner with the Molalla Pioneer to create a driveway outreach program designed to advise people about lack of access and promote creation of turn-around space.

Local Communities at Risk (Strategic Planning Areas)

Colton Fire also recognizes that there are smaller-scale Communities at Risk or Strategic Planning Areas (per the 2005 CWPP) that have unique wildfire hazards to be addressed at the more local scale. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map # 19 and listed in Table 10.5-1. Colton Fire Professionals considered the following factors to determine the local CARs including:

- Need for defensible space

- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Colton Fire will continue to facilitate cooperation between public and private organizations and local area residents to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Colton Fire (Map #19).

Fuels Reduction Priorities include:

Fernwood/Young Road Area	Hult Road
Dhooghe Road	Hunter Road

Colton Fire District Action Plan

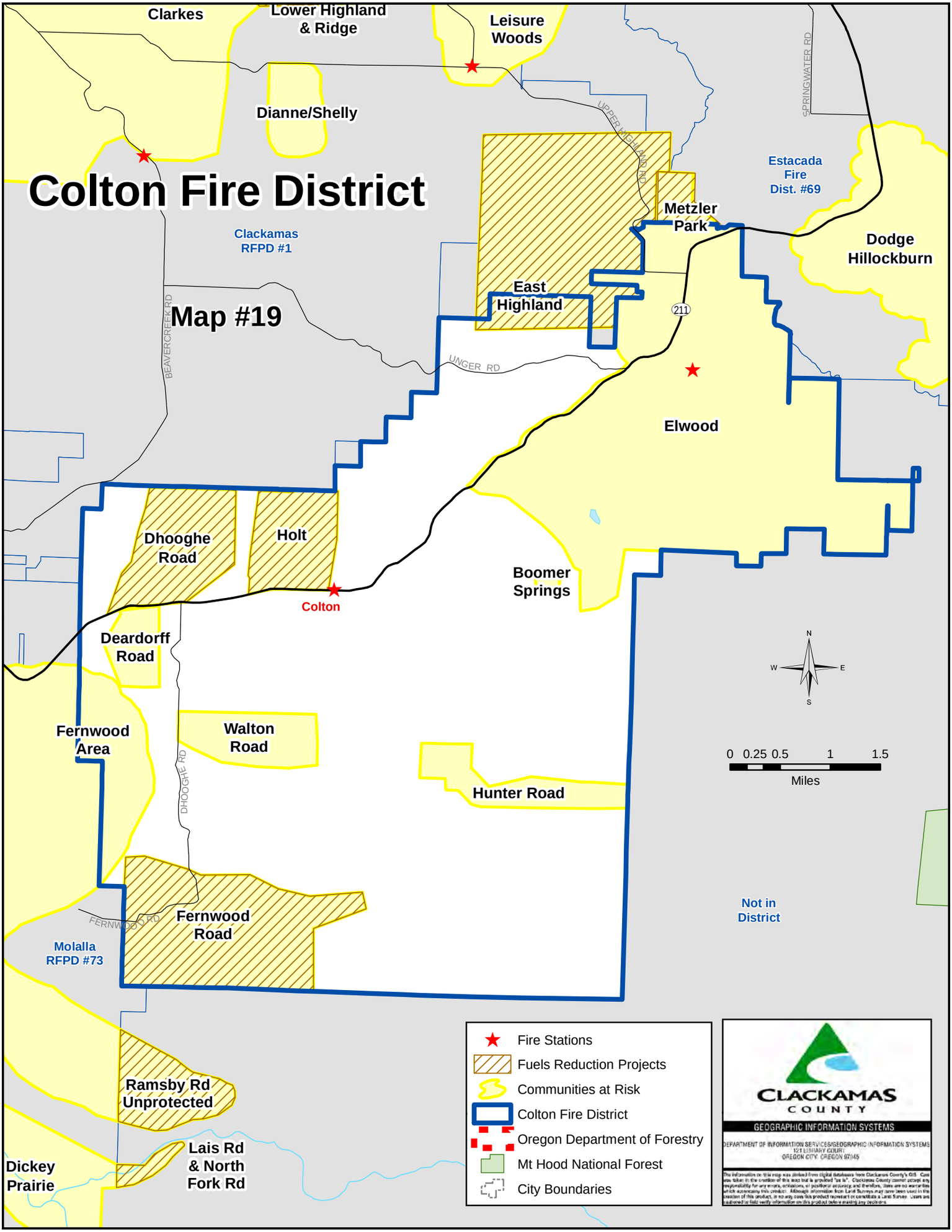
Colton Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Colton Fire and the local CARs therein is provided in Table 10.5-2.

Table 10.5-1 Colton Fire District Local Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Colton Fire Local Communities at Risk													
Deardorf	High	X	X	X				X	X	X		X	This community has only one way in and out with very narrow, steep roads and driveways. There are many homes in this area that have dense vegetation and need defensible space. There is no water here. People in this community are not aware of the high wildfire risk here.
Boomer Springs/Schieffer	High	X	X					X	X	X		X	There are not many homes in this community, but those that are located here have long, narrow driveways with no turn-around. There is no water here and there are very steep slopes.
Walton/Tiffany	High	X	X	X	X	X	X	X	X	X		X	This community has many have long, narrow driveways with trees overhanging and encroaching. There is no water here and homes are in great need of defensible space . Industrial forest lands surround the community and could be potential ignition sources.
Fernwood/Young Road Area	High	X	X	X		X	X	X	X	X		X	This Community has very limited access with many roads being one way in and out and access is very narrow. Rounds Road is a very narrow, gravel road. Water is limited. There is a creek with a pond but they are difficult to access. The community is adjacent to Port Blakey and Weyerhaeuser industrial forest operations. ATV's illegally access the Weyerhaeuser land where there is a great deal of slash from previous timber operations. Residents here burn all year, so they a great deal of fuel around homes is removed during the winter and spring, but there are some people who wait until summer to burn. OSU also has a managed forest here. ODF crews plan to brush out end of Odeen.
Dhooghe	Medium	X	X	X		X		X	X	X			This area is relatively flat, but access is still difficult because many homes have long, narrow driveways. There is also a very narrow bridge that is one way in and out. Frank Road is in very poor condition. There is no water here. There is active logging in the heavily managed, private forest lands adjacent to the community. This forested area has a lot of ladder fuels on the western portion and could be targeted for Fuels Reduction.
Holt Road	Medium	X	X			X			X	X		X	The access in this community is extremely limited because Holt Road is now closed, making it one way in and out. It is also very steep. There is a good creek at the bottom, and about half of this community has hydrants. There are small, private forest lands surrounding the community. The managed woodlands look good, but the unmanaged woodlands have heavy fuels loading.
Hunter Road	Medium	X	X	X	X	X	X	X	X	X		X	This community only has one way in and out and it is very steep. There is a cluster of homes that need defensible space. Port Blakely and Weyerhaeuser own industrial forest lands that surround the community. Many local youth illegally access these areas to hang out, smoke cigarettes and start campfires.
Ellwood Engstrom/Area	Medium	X	X			X		X	X	X		X	This community has good water with creeks and ponds from which pumps can draw. There are many homes here with narrow driveways. there is also a small bridge that fire apparatus cannot access. Gillet is a one way road that has no turn-around which is a very big issue. Port Blakely manages industrial forest land adjacent to this community.

Table 10.5-2. Colton Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Colton Fire Action Plan			
Pursue grant funding to purchase Wildland PPE to replace outdated PPE (fire shelters)	2 Years	ODF	Colton Fire
Work with Clackamas County to ensure coordination regarding the new development on Rolliewood Road. As new homes are built, the District should be notified because no parking signs are required to be posted on all legal roads.	6 Months	Clackamas DTD	Colton Fire
Work with Clackamas County to ensure coordination regarding development on existing lots and roads of record.	2-3 Years	FDB, SFMO	Colton Fire
Work with Clackamas County to use the total square footage of the home including any remodel expansion as the threshold for contacting Fire Agencies for access and water requirements.	2-3 Years	FDB, SFMO	Colton Fire
Work with ODF, USFS and other land managers to identify opportunities to participate in Live Fire Training.	Ongoing	ODF, USFS, BLM	Colton Fire
Partner with the Molalla Pioneer to create a driveway outreach program designed to advise people about lack of access and promote creation of turn-around space.	1 year	Molalla Pioneer	Colton Fire
Work with Clackamas County to receive notification of occupancy permits through monthly emails and request access/training to use the Velocity Hall System.	6 Months	Clackamas County, SFMO	Colton Fire
Colton Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate the community and solicit feedback on wildfire prevention projects the community would support.	Ongoing	ODF	Deardorf
Work with CCFD#1 to educate residents of Holt road about the importance of being prepared since response time is increased with the closure of the road.	Ongoing	CCFDF#1	Holt Road
Begin identifying and improving potential water sites in Communities at Risk.	Long-Term	ODF	All Car's
Work with Port Blakely and Weyerhaeuser to post signage and develop additional strategies to discourage illegal trespassing on forest land.	Ongoing	Port Blakely, Weyerhaeuser	Walton/Tiffany, Fernwood/Young Road Area, Hunter Road
Complete home addressing in Communities at Risk.	Ongoing	ODF	All CAR's
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	Short-Term	ODF, Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All CAR's
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All CAR's


Colton Fire District
Map #19
Clarkes
Lower Highland & Ridge
Leisure Woods
Dianne/Shelly
Clackamas RFPD #1
Estacada Fire Dist. #69
Metzler Park
Dodge Hillockburn
East Highland
Elwood
Dhooghe Road
Holt
Colton
Boomer Springs
Deardorff Road
Fernwood Area
Walton Road
Hunter Road
Fernwood Road
Molalla RFPD #73
Not in District
Ramsby Rd Unprotected
Lais Rd & North Fork Rd
Dickey Prairie
BEAVERCREEK RD
UNGER RD
DHOOGHE RD
FERNWOOD RD
UPPER HIGHLAND RD
SPRINGWATER RD
211
N
W
E
S
0 0.25 0.5 1 1.5
Miles
Fire Stations
Fuels Reduction Projects
Communities at Risk
Colton Fire District
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries
CLACKAMAS COUNTY
GEOGRAPHIC INFORMATION SYSTEMS
DEPARTMENT OF INFORMATION SERVICES/GEOGRAPHIC INFORMATION SYSTEMS
121 LIBRARY COURT
OREGON CITY, OREGON 97045

10.6. Community at Risk: Estacada Rural Fire Protection District #69

The Estacada Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Estacada Fire District Description

The Estacada Fire District is a special service district that provides fire, rescue, and prevention services to the City of Estacada and surrounding unincorporated areas. The mission of the Estacada Rural Fire District is to minimize the loss of life and property resulting from fires, medical emergencies and other disasters by providing the highest level, most cost efficient fire and life safety services possible to every person within our boundaries.

The Estacada Rural Fire District protects 88 square miles from two fire stations. There are 10 career and 40 volunteer firefighters that respond to approximately 1,300 alarms annually. About 70% of the alarms are medical responses.

Wildland Urban Interface (WUI)

Estacada's Fire District is a rural area on the eastern edge of Clackamas County adjacent to large tracts of federal and private forests. The terrain is steep, causing access and communication limitations. The Clackamas River bisects the District and continues to the Mount Hood National Forest, attracting thousands of recreators every year. Campers, hikers, hunters and other visitors to this area can potentially start wildfires that could carry from public land to the residential communities.

This area is characterized by rural residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Heavy and continuous fuels dominate this area, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Estacada Fire District.

Oregon State Parks, the Bureau of Land Management and the United States Forest Service have a few heavily forested landholdings that are adjacent to homes in the Wildland Urban Interface. As Estacada Fire targets the residential communities for creating defensible space, there is an opportunity to engage state and federal partners in reducing fuels on this adjacent public land.

Estacada Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Estacada Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Estacada Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Estacada Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Estacada Fire works with the City of Estacada and Clackamas County to integrate these concepts at the regulatory level by providing input on access and water requirements for new development. The City of Estacada uses a consulting firm for land use planning services. This presents some difficulties for the Fire District because the consulting firm does not always contact the District for input on fire flow and access. Even when the Fire District does provide input, the fire flow and access requirements are not always

communicated to the Clackamas County Building Department. These issues have been identified in the Estacada CWPP Action Plan.

Emergency Response

A major wildland urban interface fire in Estacada would quickly exceed the resources and capabilities of the District. For this reason, Estacada Fire has Mutual Aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

In the event of a large widlland fire, evacuations may be necessary. This rural area presents some difficulties due to the large number of one way in and one way out roads. More coordination and outreach is needed to ensure that evacuation procedures are developed and understood. This has been included the Estacada CWPP Action Plan.

Burning of yard waste and debris is challenging in the Estacada Fire District because backyard burning is allowed in all areas. Estacada Fire tries to be consistent with neighboring jurisdictions' Backyard Burning programs but does not have staff or resources to regulate burning in Estacada. The need for a more structured Backyard Burning Program is indicated in the Estacada CWPP Action Plan.

Estacada Fire employs 10 career and 44 volunteer firefighters who receive regular wildland fire training to remain current on qualifications. Although the District is able to support the S-130 and S-190 training, lack of hands-on fire experience makes it difficult to retain wildland qualifications. Estacada Fire would like to work more directly with the USFS and ODF to have opportunities to participate in live fires.

Community Outreach & Education

Estacada Fire is dedicated to fire prevention, and uses a variety of forums to promote residential fire safety, defensible space, and safe burning practices. The District has programs designed to empower community members to take a more active role in being prepared for any emergency. These include the Map Your Neighborhood Program, Community Emergency Response Teams, Citizen Ride-Alongs, discounted address signs and station tours. Estacada Fire is also an active member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, community and school programs, and fire safety house displays. Estacada Fire would like to update its fire prevention program by taking advantage of cost effective social media outlets and engaging youth groups from Estacada High School and Timberlake Job Corps.

Local Communities at Risk (Strategic Planning Areas)

Estacada Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map#20 and listed in Table 10.6-1. Estacada Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)

- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Estacada Fire will facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Estacada Fire (Map 20).

Fuels Reduction Priorities include:

Eagle Creek Youth Camp
Paradise Park
Redland Road Area
McIver Park
Metzler park
Ranger Woods
Silver Fox RV Park

Estacada Fire District Action Plan

Estacada Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Estacada Fire and the local CARs therein is provided in Table 10.6-2.

Table 10.6-1. Estacada Fire District Local Communities at Risk

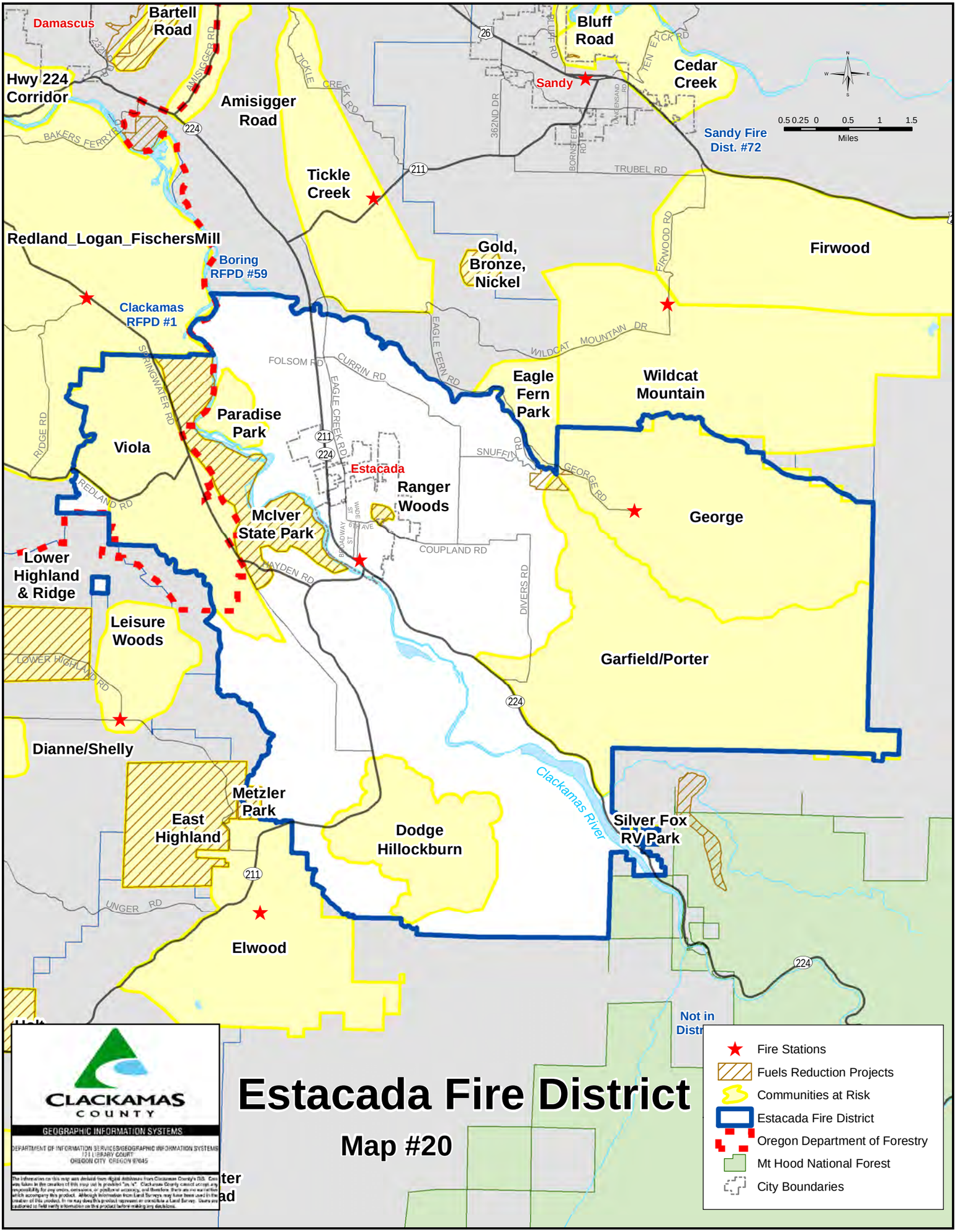
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Estacada Fire Communities at Risk													
Garfield/Porter Community/Eagle Creek Youth Camp	**High**	X	X	X	X	X	X	X	X	X	X	X	Access in this community is a big loop. There has been conflagrations in this area, which turns the loop into one way in and out. There are unique events that occur in this area including a nudist colony that holds events and there have also been music festivals here which bring many people. There is inadequate access and water for the number of people these events can bring in. It would be very beneficial to identify an alternate water source here because it is also adjacent to Federal and private forests. There are also many environmental activists here. Protection capabilities are compromised because it takes about 25 minutes, which can be even longer depending on the weather. Eagle Creek Youth Camp is an area of particular concern because of heavy vegetation, and you must access the camp through home driveways and private roads that likely cannot support apparatus. Water supply is improving because the camp is putting in hydrants in to get bldg permits. Access to the camp is one way in and out, and there are cabins throughout the woods. There is one open field that could be used for staging- life flight area, safety zone. Camp is a Fuels Reduction priority.
Dodge- Hillock Burn Area	**High**	X	X	X	X	X	X	X	X	X	X	X	Access in this community is particularly challenging on one way roads including: McQueen, Peterson, Horner and Benjamin. There is no water available here, so water would be brought in for fire fighting. The community is surrounded by BLM, USFS and private forest land. Recreates bring ATVs here despite the fact that there are there are gates. There are many old logging roads that attract recreators. There have also been law enforcement issues in this area. Also, response times would be longer because the Hwy 211 bridge is only access so if there is an issue there, the community could be inaccessible. Communications are limited for 800 MHz in area (50%) , but VHF is good.
George Community	**High**	X	X	X		X	X	X	X	X	X	X	This community has heavy fuels next to homes, steep slopes and poor access. There are many one way in and out roads and response professionals would likely enter from the Boring Fire District. There is a fire station up there but Estacada Fire has had difficulty recruiting and retaining volunteers in this area. There are also many back roads people take with can be potential ignition sources.
Paradise Park, Twin Island, Star Road	**High**	X	X	X			X	X	X	X	X	X	All three of these areas have neighborhood associations, so they would be great to target for community clean up events. Access here is one way in and out, there is heavy vegetation, steep slopes, and you cannot draft out of the river so water will be hauled in. There is a great deal of recreation on the river, which people access illegally through private property and on the little islands. Protection of this area is difficult because the road is susceptible to landslides and it is one way in and out. There is a secondary way in and out, but it cannot support emergency vehicles. Communications can be an issue because it is a canyon. Paradise Park is a fuels reduction priority.

Table 10.6-1. Estacada Fire District Local Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Redland Rd Area- Viola Area, Fellows road	Medium	X		X	X	X	X		X	X	X	X	This interface community has heavy vegetation adjacent to homes which extends into adjacent forest land. Some adjacent forest land is BLM and some is private industrial. The access is fair, but there are a number of one way roads that could make response and evacuation challenging. There is a potential water supply up on the hill, but it hasn't been developed very well. CCFD#1 has a volunteer fire station in this area, so protection capabilities should be acceptable. Communications are at about 75% coverage in this area and cell coverage is even available in the canyon.
McIver Park & Parkview & Riverlake Community	Medium	X	X	X	X	X	X	X	X	X	X	X	ODF used seasonal crews to reduce fuels in did some fuels reduction in McIver State Park, and identified additional work to be done to make the park more fire resistant. There are two neighborhoods adjacent to the Park with heavy fuels leading directly to the homes. The river can be accessed for drafting. Access is one way in and out in all these areas, with very steep terrain which goes almost vertical near Feldheimer Road. Despite being able to draft from the river, some areas would require hauling water in to the site. There is river access for boat launching at the State Park and Feldheimer road also has a public boat launch. Transients are often sighted on Riverlake Road. This area is a priority for fuels reduction.
Metzler Park	Medium		X	X	X		X	X			X	X	This State Park is a good candidate for fuels reduction. It has one way in and out, and many recreators use this facility. Water is limited here. There is a creek which could serve as a potential water source, and this needs to be explored further.
Ranger Woods	Medium	X			X				X	X	X	X	Ranger Woods is owned by Estacada Schools and is adjacent to neighborhoods in northeast portion of town. Defensible space around the homes and the school is needed. This wooded area is particularly vulnerable because young adults coming from the school like to congregate here and sometimes light fires, smoke cigarettes, and engage in other activities that could serve as an ignition source. There is also a high concentration of invasive species here. This area is a high priority for fuels reduction.
Silver Fox RV Park- USFS	Low	X	X	X	X		X	X	X	X			This RV park gets extremely busy during the wildfire season. There is dense vegetation near the camping spots that the RVs and campfires could ignite easily. This is a priority for fuels reduction.

Table 10.6-2. Estacada Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Estacada Fire Action Plan			
Promote improvements to the 800 MHz system throughout Estacada to enhance coverage throughout the District.	Long-Term	UASI, CCSO, CCEM, FDB	Estacada Fire District
Identify and pursue opportunities to provide Incident Management Training for firefighters that will be Incident Commanders on larger scale emergencies.	Ongoing	FDB, CCEM, NAFT	Estacada Fire District
Work with the City Manager to ensure that the contracted land use planner for the City consults Estacada Fire for access and fire flow requirements. Improve coordination between the contracted planner and Clackamas County Building Department to ensure that all fire flow and access requirements are met.	6 Months	City of Estacada, Clackamas County	Estacada Fire District
Invigorate the District's Outreach and Education Program by partnering with ODF to incorporate wildfire prevention into the annual Open House and Safety Fair.	1 Year	ODF	Estacada Fire District
Pursue grant funding to purchase Wildland PPE to replace outdated PPE.	2 Years	FDB, ODF	Estacada Fire District
Develop a marketing campaign that utilizes social media outlets to build support and capacity for the Estacada Fire District (volunteer recruitment, community support, fund raising).	3 Years	Fire Co-op	Estacada Fire District
Identify opportunities to engage young adults in community service and wildfire prevention projects.	2 years	Estacada High School, Timberlake Job Corps	Estacada Fire District
Build capacity and support for a more involved backyard burning program including staff to educate local residents and regulate the Backyard Burning Program.	Long-Term	ODF, DEQ, Fire Co-op	Estacada Fire District
Estacada Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability. Solicit feedback on wildfire prevention projects the community would support.	2 Years	ODF	Garfield/Porter Community
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	2 Years	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	2 Years	ODF, DEQ, Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All CAR's
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in Communities at Risk.	2 Years	ODF	All CAR's
Promote the District's Map Your Neighborhood and CERT programs to generate community-driven pre-disaster plans including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All CAR's
Implement road addressing (including length of driveways) and other signage for emergency response.	2 Years	ODF	All CAR's
Work with partner agencies such as ODF, SWCD and Ford Institute to procure funding and technical assistance for reduce fuels in and around priority CAR's.	2 years	ODF, SWCD, Grant Funders	All CAR's
Work with State Parks to reduce hazardous fuels in their parks and provide signage to educate recreators about wildfire prevention.	3 years	State Parks, ODF	McIver Park, Metzler Park
Work with USFS and BLM to reduce fuels on federal land adjacent to CAR's.	3 years	USFS, BLM, Silver Fox RV Park	Silver Fox RV Park, Redland Road
Conduct Community Clean Up Days to reduce hazardous fuels. Identify opportunities to recycle or compost vegetative material instead of burning.	2 Years	ODF	All CAR's



Estacada Fire District

Map #20

10.7. Community at Risk: Gladstone Fire Department

The Gladstone Fire Department has been identified as a Community at Risk (CAR) by the Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Gladstone Fire

The Gladstone Fire Department provides fire, rescue, and prevention services to the City of Gladstone. The Gladstone Fire Department is primarily staffed by volunteers and is supported by a paid Fire Marshal and a Volunteer Coordinator.

Wildland Urban Interface (WUI)

Despite being primarily urban, some areas in the Gladstone are excellent examples of the Wildland Urban Interface. They are characterized by residential homes surrounded by heavy fuels and steep slopes. Some communities have only one way in and one way out with narrow, steep driveways and poor address signage. Heavy and continuous fuels are present in some natural areas and parks adjacent to neighborhoods, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the City of Gladstone.

Gladstone Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Gladstone Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the City of Gladstone and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

The City of Gladstone contracts with Clackamas County for land use planning and building permit services, and has a local planning commission to help guide development. Gladstone Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI by working with Clackamas County to integrate these concepts at the regulatory level. Gladstone Fire participates in land use reviews for new development to provide input on access and water supply.

Emergency Response

A major wildland urban interface fire in Gladstone would quickly exceed the resources and capabilities of the Department. For this reason, Gladstone has mutual aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires. Gladstone's primary mutual aid partner is Clackamas Fire District #1, which completely surrounds the City of Gladstone. Burning of yard waste and debris is prohibited in Gladstone, as it is located within the DEQ Burn Ban Boundary.

Gladstone Fire employs 2 career and many volunteer firefighters. Historically, Gladstone Fire participated on state mobilization strike teams, but has opted out of this partnership in recent years due to diminished capacity to support training and maintain qualifications necessary to participate. Gladstone Fire provides annual refresher training to all staff, and will send new staff to Clackamas County Community College to receive S-130 and S-190. The Department would like to improve its capacity in developing and retaining wildland fire certifications, and this is noted in the action plan.

Community Outreach & Education

Gladstone Fire supports fire prevention, but has a limited capacity to develop and implement public outreach programs. Gladstone Fire is a member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs and safety fairs. Gladstone Fire would like to be a more active member of the Coop to increase their capacity for providing structural and wildland fire prevention programs in the City.

Local Communities at Risk (Strategic Planning Areas)

Gladstone Fire recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #21 and listed in Table 10.7-1. Gladstone Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Gladstone Fire will help to facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Gladstone Fire (Map #21).

Fuels Reduction Priorities include:

Parkway Woods	Billy Goat Island

Gladstone Fire Action Plan

Gladstone Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Gladstone Fire and the local CARs therein is provided in Table 10.7-2.

Table 10.7-1. Gladstone Fire Department Local Communities at Risk

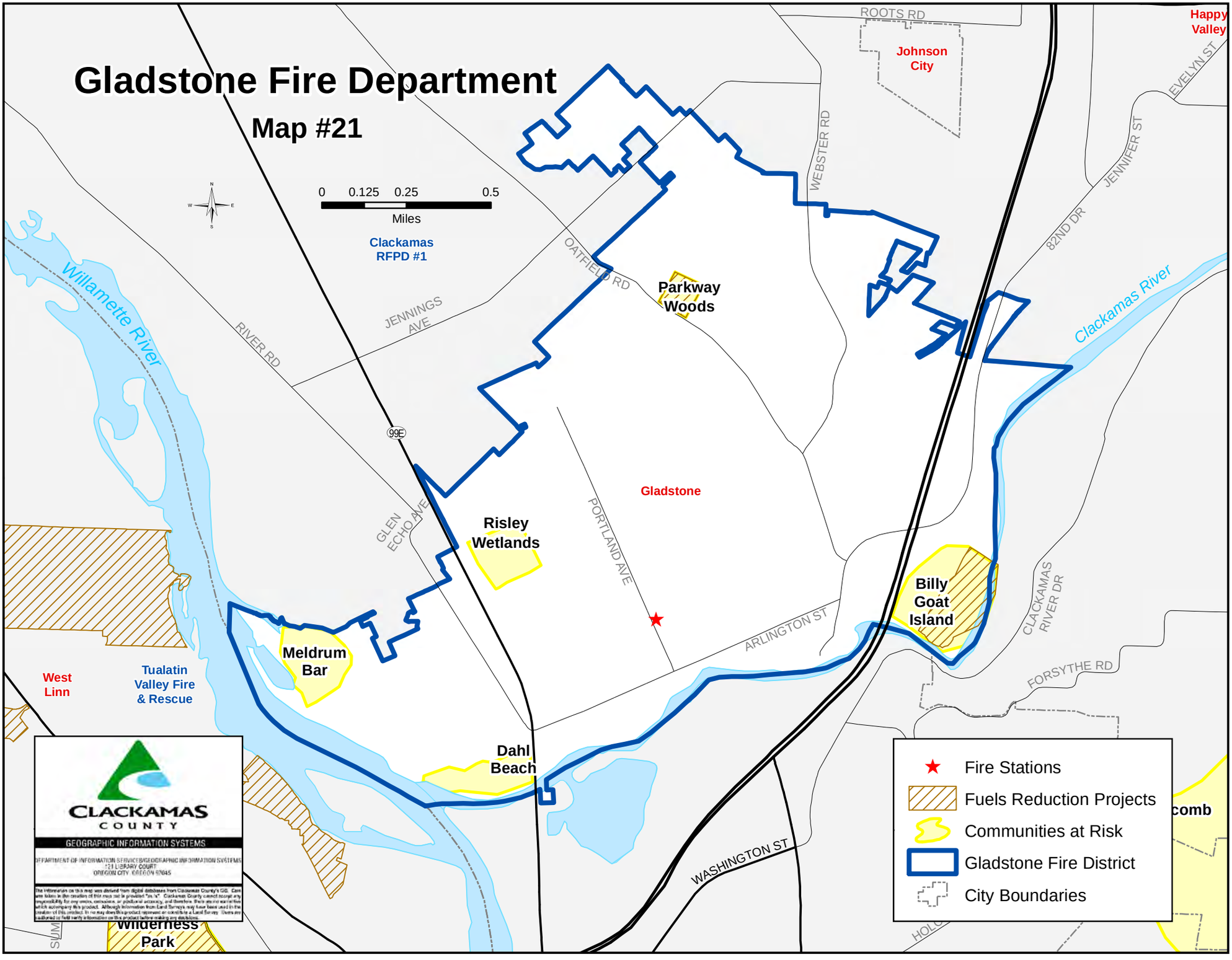
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Gladstone Fire Local Communities at Risk													
Parkway Woods	**High**	X	X		X					X		X	Parkway and Windfeild court are adjacent to this natural wooded area. There is no access into the wooded area and it has very steep and difficult terrain to navigate. There is water on Oatfield and Parkway. The biggest issue is access and vegetation. This is a common are for the Parkway community and is choked with ladder fuels and invasive. this is a high priority for fuels reduction. A city councilor lives here and could be a champion for a community clean up event.
Billy Goat Island	**High**	X	X	X	X		X	X	X				This island is a popular place for recreators and transients. A wildfire occurred here in 1995, and response efforts were extremely challenging because access is very poor. There is a transient camp that has cause problems in the past, so Gladstone Fire has been working with the Gladstone Police Department and ODOT to remove it. There is a great deal of heavy vegetation adjacent to homes in this area, making it a priority for fuels reduction. A fire break is needed as well as a fire lane. There is a very expensive home with a very long driveway in this area as well that of cause for concern.
Dahl Beach	**High**	X	X	X	X		X		X				This is a very popular area for recreators and transients, Many people using Dahl Beach will make campfires which serve as potential ignition sources. There have been fires here in the past and access was extremely difficult.
Risley Wetlands	**Medium**	X	X	X	X			X		X			Access is poor throughout this community. There also is no access into the natural wooded area which is adjacent to a subdivision, and is likely where a fire would begin. The homes here are very close to the vegetation from the wooded area.
Meldrum Bar Park	**Low**		X	X			X		X				Meldrum Bar Park has no residences, but is a heavily populated during the summer months. This would be a priority for fuels reduction and community education.

Table 10.7-2. Gladstone Fire Department Action Plan

Action Item	Timeframe	Partners	CAR
Gladstone Fire Action Plan			
Work with ODF and the USFS and other partners to identify opportunities to train staff in S-130 and S-190.	Ongoing	USFS, ODF, Fire Defense Board	Gladstone Fire
Schedule periodic meetings with local building officials, land use planners and fire marshals to build relationships and encourage cooperation.	Ongoing	Building Officials, Land Use Planners, Fire Marshals	Gladstone Fire
Invigorate the Dept's Outreach and Education Program by partnering with ODF to incorporate wildfire prevention into current outreach programs including local school programs.	1 Year	Fire Co-op	Gladstone Fire
Gladstone Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability. Solicit feedback on wildfire prevention projects the community would support.	2 Years	ODF	Parkway Woods
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	2 Years	Fire Co-op	All CAR's
Post signage that explain fire restrictions in natural areas.	1 Year	County Parks	Meldrum Bar, Billy Goat Island, Dahl Beach

Gladstone Fire Department

Map #21



10.8. Community at Risk: Hoodland Fire Protection District #74

Hoodland Rural Fire Protection District #74 (Hoodland Fire) has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Hoodland Fire District Description

Hoodland Fire covers 45 square miles of rugged foothills southwest of Mt Hood, along Highway 26, between Sandy and Government Camp, in historic East Clackamas County. Hoodland Fire protects the rural communities of Marmot, Cherryville, Brightwood, Wemme, Welches, Zig Zag, Rhododendron and Government Camp from three fire stations. This rural area depends on a staff of 10 career and 30-40 volunteer firefighters that are dedicated to respond and provide quality fire and life safety protection to the community. In 2010, Hoodland Fire responded to 700 emergency calls for assistance from our 6,000 permanent and 15,000 seasonal residents.

Wildland Urban Interface

This area is an excellent example of the Wildland Urban Interface because it is characterized by steep slopes with residential homes surrounded by heavy fuels. In addition, the Mount Hood National Forest surrounds many of the communities as well as industrial timber management operations, and some Bureau of Land Management land. Many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Heavy and continuous fuels dominate this area, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Hoodland corridor.

Tourism and recreation are also major influences here, with thousands of Portland area residents travelling along Highway 26 to access the Mount Hood National Forest. Campers, hikers, hunters and other visitors to this area can potentially start wildfires that could carry from Forest service land to the residential communities. Industrial and Federal forest operations are also potential ignition sources.

Hoodland Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Hoodland Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Hoodland area and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Hoodland Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials and community preparedness in the WUI. Hoodland Fire participates in land use reviews for new development to provide input on access and water supply. The Clackamas County Planning Dept. uses a WUI checklist developed in 2005 to ensure that Fire Marshals are contacted when potential issues may arise for new development. In areas zoned Forest/Agriculture, the County's Zoning Development Ordinance (ZDO) has guidelines for fire-resistant building materials and defensible space and fuel breaks.

Emergency Response

Hoodland Fire professionals have experience in structural and wildland fire response tactics, with a large percentage of staff having spent years as wildland firefighters. Hoodland Fire works closely

with the United States Forest Service and Oregon Department of Forestry and neighboring Sandy Fire District to prevent and provide quick response to fires in this area. Hoodland is a signatory to the Clackamas Fire Defense Board Mutual Aid Agreement, which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires. Although Hood River County is along the eastern border of Clackamas County, USFS land separates these two counties in this location. This has created a barrier to Hoodland Fire's ability to participate in the Hood River County Fire Defense Board Mutual Aid Agreement. This need has been identified and prioritized in the Hoodland Fire District Action Plan.

Community Outreach & Education

Hoodland Fire is dedicated to fire prevention, and uses a variety of forums to promote defensible space, fire-resistant building materials, and safe burning practices. The community of Government Camp has an Annual Community Clean Up event to create defensible for six years running. Hoodland Fire supports this effort by providing technical assistance to landowners in determining how and why to create defensible space. In addition, Hoodland Fire has provided an incentive to participate by paying for the chipping costs associated with the clean up. The Fire District also attends Home Owners' Association meetings to discuss structural and wildland fire safety three to four times a year. The District also completed structural triage surveys at 375 homes in 2011 during the Dollar Lake Fire, which generated a great deal of interest and increased homeowners' awareness of the risk to their homes from heavy vegetation and poor access.

Local Communities at Risk (CAR's)

Hoodland Fire also recognizes that there are smaller-scale Communities at Risk or Strategic planning Areas that have unique wildfire hazards to be addressed at the more local level. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #22 and listed in Table 10.8-1. Hoodland Fire Professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Hoodland Fire will continue to facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Hoodland Fire (Map #22).

Fuels Reduction Priorities include:

Lolo Pass	Brightwood
Marmot	Government Camp
Barlow Trail	Cherryville/Alder Creek

Hoodland Fire District Action Plan

Hoodland Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Hoodland Fire and the local CARs therein is provided in Table 10.8-.2.

Firewise USA Communities

The National Fire Protection Agency's Firewise Communities/USA Recognition Program encourages and acknowledges citizen action to reduce wildfire risk. ODF received Title III funding to promote the Firewise Communities/USA Program, with the goal of creating certified communities in high priority Communities at Risk. ODF worked with Hoodland Fire to create two certified Firewise Communities. Participation in the Firewise Communities/USA Program is an ongoing process of community commitment to wildfire safety.ODF and Hoodland Fire will continue working with Zig Zag Village and Government Camp to reduce wildfire hazards and retain Firewise/USA certification.

Zig Zag Village, Rhododendron, OR

Zig Zag Village has been identified as a Community at Risk (CAR) by the Hoodland Fire District because it is surrounded by forest land, has heavy fuels adjacent to homes, has only one way in and out, and is in a high wildfire danger area. In addition, there are many vacation homes and undeveloped lots that are overgrown with ladder fuels. The Zig Zag Home Owner's Association worked with the ODF, Hoodland Fire District and the USFS to assess wildfire hazards throughout the community and develop strategies to mitigate them. Zig Zag Village held a Firewise Community Clean-Up Day to begin implementing the Firewise recommendations for becoming more wildfire resilient communities. The ODF used seasonal hand crews to create a Firewise demonstration area to illustrate measures that can be taken to reduce wildfire risks.

Government Camp, OR

The Government Camp Community Planning Organization includes a number of smaller Home Owner's Associations in Government Camp. This is a destination community for winter and summer sports that draws many recreators throughout the year. The majority of homes in Government Camp are vacation homes, and there are also a number of multifamily dwellings that are used to house snow board camps. There are also two large condominium communities here.

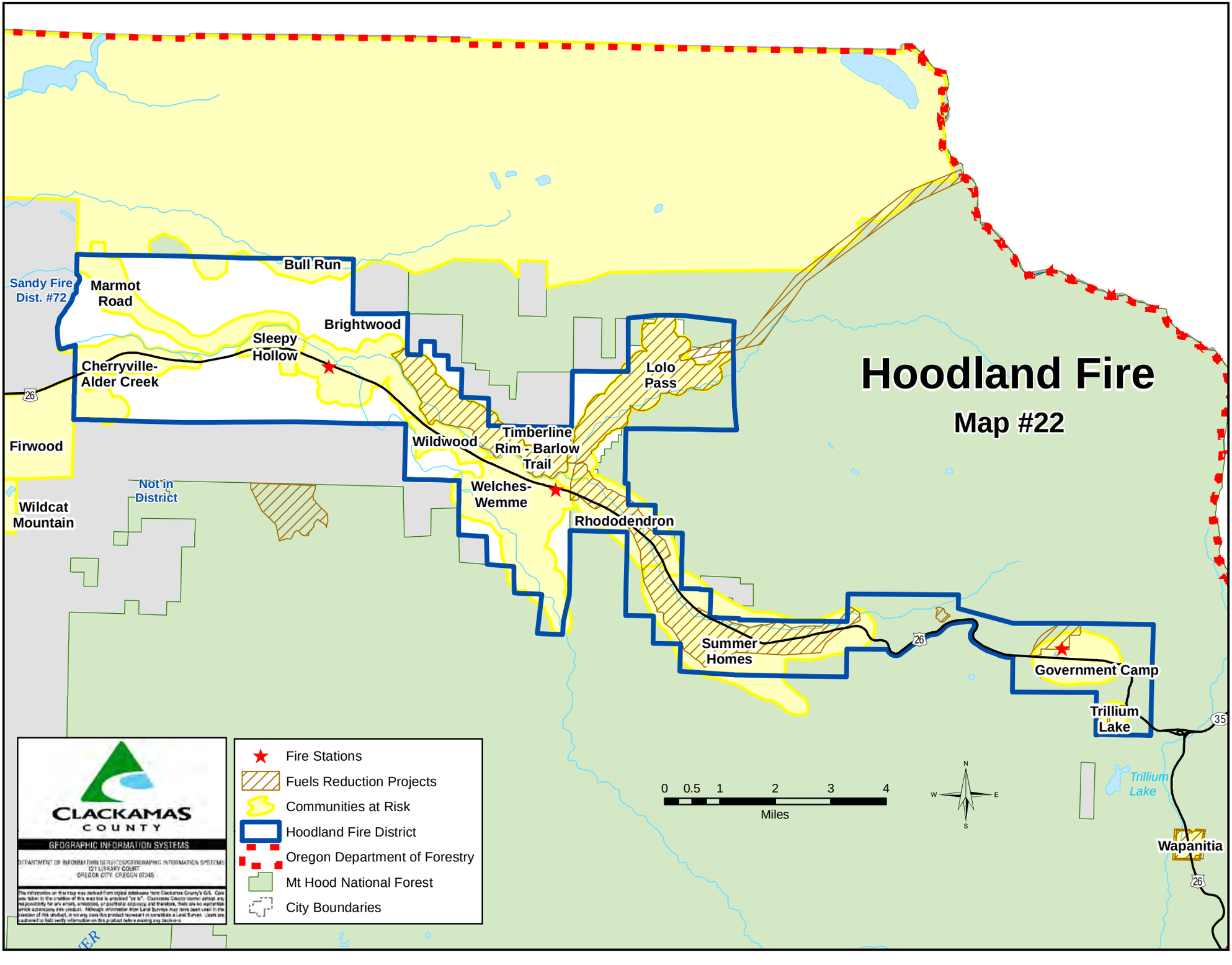
Government camp is surrounded by the Mount Hood National Forest. Heavy fuels and decadent Lodge Pole Pine stands are present adjacent to homes as well as USFS land. Government Camp worked with the ODF, Hoodland Fire District and the USFS to assess wildfire hazards throughout the community and develop strategies to mitigate them. Government Camp held a Firewise Community Clean-Up Day to begin implementing the Firewise recommendations for becoming more wildfire resilient communities. The ODF used seasonal hand crews to create a Firewise demonstration area around the volunteer fire station and the Ski Club to illustrate measures that can be taken to reduce wildfire risks.

Table 10.8-1. Hoodland Fire District Local Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Hoodland Fire & Rescue Local Communities at Risk													
Government Camp/ Summit Meadows	**High**	X	X	X	X		X	X		X	X	X	The communities of Government Camp and Summit Meadows are particularly vulnerable to wildfires because they are located along a ridge top that has very steep slopes, poor access, and heavy fuels. These communities are located on Mount Hood along Highway 26 a heavily travelled road that provides access to forested areas used for recreation which increases potential ignition sources and fuels. The area is completely surrounded by USFS land, access is limited to 1-way in and out with narrow roads and no turnarounds. Due to its location, response times are greater than 10 minutes, and response efforts will prove difficult as the roads are steep, driveways are narrow and are not well marked, and there are no known alternative water sources for the ridgeline. The terrain also limits radio communication to VHF.
USFS Summer Homes	**High**	X	X	X	X		X		X	X		X	The USFS Summer Homes are a unique community at risk as the USFS owns the land, but residents own the houses here. Because the USFS must be in compliance with State and Federal environmental protection laws, it is more difficult to reduce hazardous fuels here. In addition, many of the homeowners are absentee, so public education is challenging. The majority of roads in this area are narrow, not well-maintained and do not provide adequate turn arounds for emergency service vehicles. Hoodland Fire and ODF have completed address signage for the homes in this CAR.
Rhododendron/Zig Zag/Woodland	**High**	X	X	X	X	X	X		X	X	X	X	Rhododendron is characterized by narrow roads, heavy fuels, and limited access. Public and private industrial forest land operations surrounding this community provide potential ignition sources. Water would need to be brought in to fight fire here. Address signage is needed. The Zig Zag and Woodland communities are surrounded by heavy fuels and have very poor access. There is no water available here and address signs are needed. However, the community has a great network for notifications during emergencies that could potentially be used for preparedness efforts.
Lolo Pass	**High**	X	X	X	X	X	X		X	X	X	X	Lolo Pass is surrounded by heavy vegetation on both residential lands as well as forest service and private woodlands. The access here is limited to one way in and out, and water would need to be brought in to fight fire. Some homes in this CAR are second homes, making it more difficult to work with landowners.
Marmot	**High**	X	X	X	X	X	X		X	X	X		The Marmont community is comprised of farms and ranches that have large BPA power lines overhead. These power lines serve as ignition sources when the heavy brush below become tinder in the summer months. Access is limited to one way in and one way out. This area is adjacent to the Bull Run Watershed, which provides drinking water for the City of Portland.
Cherryville/Alder Creek	**High**	X	X	X	X		X	X	X	X		X	This Community has very steep terrain which limits access and communication. Hoodland Fire sometimes has to access the area by going into the Sandy Fire District. Land uses here include agriculture and timber operations and well as USFS lands. This CAR is a community asset as well because it includes the water source for the City of Sandy.
Welches/Wemme	**Medium**	X	X	X	X	X	X		X	X	X	X	The Welches/Wemme area has very poor access with only about 255 of homes having address signs. There is water here, but the roads are extremely narrow. Public and private industrial forest operations on lands adjacent to homes provide potential ignition sources.
Barlow Trail (Timberline Rim Division 1-4)	**Medium**	X	X	X	X	X	X		X	X		X	Barlow Trail has very poor access, with many roads having only one way in and out. About 255 of homes have address signs, and some of these are incorrect. The community is adjacent to the Bull Run Watershed, which has heavy fuels. Escaped and/or illegal burns is a major issue in this CAR.
Brightwood/ Sleepy Hollow (Timberline Rim Division 5)	**Medium**	X	X		X	X	X		X	X		X	This community is adjacent to USFS, industrial forest lands and the Bull Run Watershed. It has a good water supply and access is fair. Address signs are needed here.
Summit Meadows	**Medium**	X	X	X	X		X	X	X	X			Summit Meadows is a recreational area with many wooden cabins that house people throughout the year. There is also a ski camp here. The area has extremely steep slopes and heavy fuels surrounding access roads and structures.

Table 10.8-2. Hoodland Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Hoodland Fire Action Plan			
Develop a volunteer recruitment and retention program.	Ongoing	HART Teams	Hoodland Fire
Work with DPSST, USFS and ODF to participate in wildfire response efforts to keep fire certifications current.	Ongoing	DPSST, USFS and ODF	Hoodland Fire
Work with Hood River County Fire Defense Board to develop mutual aid agreements.	2 Years	Hood River County Fire Defense Board	Hoodland Fire
Cultivate partnerships with Parkdale, Dee, Odell and Hood River County to encourage effective communication and coordination.	2 Years	Parkdale, Dee, Odell and Hood River County	Hoodland Fire
Encourage USFS to extend fuels reduction treatments beyond the mountain bike track to the power lines.	4 Years	USFS	Hoodland Fire
Develop and distribute newsletter to educate community on defensible space, and measures that can be taken to reduce structural ignitability.	Annually	HOA's, ODF	Hoodland Fire
Work with Clackamas County Land Use Planning to encourage wildfire resistant building materials and home sprinkler systems through incentive programs (e.g. reduced permit fees).	Ongoing	Clackamas DTD, WFPEC	Hoodland Fire
Hoodland Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate the community and solicit feedback on wildfire prevention projects the community would support.	Spring 2013	ODF, USFS	Zig Zag Village, Timberline Rim
Complete home addressing in all Communities at Risk.		ODF, Fire Co-op	All
Continue the annual community clean up event at Government Camp and encourage other Communities at Risk to participate.	Ongoing	ODF, USFS	All
Work with USFS, ODOT and other land owners to extend vegetation treatments from defensible space to reduce fuels in common areas, right of ways, and other public and private land.	Ongoing	USFS, ODOT, Clackamas County, Private Landowners	Govt. Camp, Timberline Rim, Summer Homes, Marmont Road, Salmon River and Lolo Pass Roads
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF, Wildfire Technical Committee	All
Continue to promote wildfire preparedness preparedness at Home Owners Association meetings in 3-4 Communities at Risk each year.	Ongoing	ODF	All
Continue structural triage assessment data collection for structural ignitability and defensible space. Utilize this information to target areas for outreach and fuels reduction programs.	Ongoing	ODF	All
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	HART Teams	All
Develop clear and effective signage for emergency response that includes alternative routes.	5 Years	ODF,Clackamas County, ODOT	All
Inventory existing water resources and identify alternative water sources to support potential wildfire fighting efforts. Provide signage for these sources.	3 Years	ODF, USFS	All


Hoodland Fire
Map #22
Sandy Fire Dist. #72
Marmot Road
Bull Run
Brightwood
Sleepy Hollow
Cherryville-Alder Creek
Firwood
Wildcat Mountain
Not in District
Wildwood
Timberline Rim - Barlow Trail
Lolo Pass
Welches-Wemme
Rhododendron
Summer Homes
Government Camp
Trillium Lake
Trillium Lake
Wapanitia
26
35
CLACKAMAS COUNTY
GEOGRAPHIC INFORMATION SYSTEMS
Fire Stations
Fuels Reduction Projects
Communities at Risk
Hoodland Fire District
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries
0 0.5 1 2 3 4
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10.9. Community at Risk: Lake Oswego Fire Department

The Lake Oswego Fire Department has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The Department has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Lake Oswego Fire Department Description

The Lake Oswego Fire Department provides emergency response to nearly 50,000 citizens within the City of Lake Oswego and three adjoining contract districts (Lake Grove Rural Fire District, Riverdale/Dunthorpe Fire District, and Alto Park Water District).

Four fire stations are strategically located throughout Lake Oswego to provide rapid emergency service to citizens in need 24 hours a day. Emergency services include fire suppression, emergency medical response, hospital ambulance transportation, water & dive rescue, technical rescue operations, hazardous materials incidents, and disaster response.

Along with protecting citizens within the city and contract districts, the Lake Oswego Fire Department has mutual aid agreements with the Portland Fire and Life Safety Bureau, Tualatin Valley Fire & Rescue and is a signatory to the Clackamas Fire Defense Board.

Wildland Urban Interface (WUI)

Growth and development in forested areas is popular within the City of Lake Oswego. Wildfire has an effect on development, yet development can also influence wildfire. Owners often prefer homes that are private, have scenic views, are nestled in vegetation, and use natural materials. A private setting may be distant from public roads, or hidden behind a narrow, curving driveway. These conditions however, make evacuation and firefighting difficult. The scenic views found along Iron Mountain Bluff, Palisades, Mountain Park and around the lakes rim can also mean areas of dangerous topography. Natural vegetation contributes to scenic beauty, but it may also provide a ready trail of fuel leading a fire directly to the combustible fuels of the home itself.

The forested hills surrounding Lake Oswego are considered to be interface areas. The interface neighborhoods are characterized by a diverse mixture of varying housing structures, development patterns, ornamental and natural vegetation, and natural fuels.

Lake Oswego Fire Department Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted the Lake Oswego Fire Department in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Lake Oswego Fire Department and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

The Lake Oswego Fire Department promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Lake Oswego Fire works well with other City of Lake Oswego Departments to integrate these concepts at the regulatory level by participating in land use reviews for new development to provide input on access and water supply. When they are deficient in access or water the Fire Marshal's Office can offer alternative measure such as residential sprinklers. Lake Oswego Fire also approves all occupancy permits to ensure that recommendations regarding access and water supply are implemented.

However, the wildfire hazard remains high in many residential developments. Some conditions exiting in these areas include large houses on small lots, cedar shake roofing, open wooden decks adjacent to heavy fuels, and homes built on steep slopes with wooden stilts as support.

One of the most problematic issues is highly flammable cedar shake roofing. Roofs are the most vulnerable part of the home, as the majority of homes lost to wildland fires are ignited from embers landing on roofs and gutters. Despite this threat, some Home Owners Associations (HOA's) in Lake Oswego still require cedar shake roofs. Lake Oswego Fire would like to reduce the structural ignitability of roofs by educating these HOA's about the risks associated with cedar shake and the viable, attractive alternatives. Lake Oswego Fire would also like to work with the City of Lake Oswego Building Department and Oregon Department of Forestry to adopt a Wildland Urban Interface area which would disallow cedar shake roofs in areas particularly vulnerable to wildfire.

Road access is a major issue for all emergency service providers. Firefighters are particularly challenged by narrow roads, with limited access because the fire trucks are large, and the equipment needed to fight fires is located on the trucks. When there is doubt concerning the stability of residential accesses, or adequate turn around space, the fire fighters can only work to remove the occupants, but saving the structure is difficult. Many of the Communities At Risk (CAR's)to wildfire in Lake Oswego exhibit a combination of these issues that limit access.

Although the City of Lake Oswego has comparatively a good water system, additional hydrants could be installed in the Iron Mt. Bluff area and in other communities at risk to assist with fire suppression efforts should they be needed. This and the other issues listed here are addressed in the Lake Oswego Fire Department Action Plan.

Emergency Response

Lake Oswego Fire Professionals are trained for wildland fires with an annual training regime that supports the S-130 and S-190 with a goal of training staff to S-290. Certification through DPSST is voluntary.

Lake Oswego Fire officials are most concerned with potential wildfires igniting in late summer during and east wind event. A major wildland urban interface fire in Lake Oswego would quickly exceed the resources and capabilities of the Department. For this reason, LO Fire has Mutual Aid agreements in place which allow for the sharing of resources across the county in the event of a large scale disaster including wildfires. Due to its location, Tualatin Valley Fire and Rescue or Portland Fire and Rescue in neighboring Washington and Multnomah Counties would likely be the first to provide mutual aid during an event.

Community Outreach & Education

Lake Oswego Fire is dedicated to fire prevention, and uses a variety of forums to promote residential fire safety, defensible space, and emergency preparedness. Lake Oswego Fire developed an educational hand-out focusing on defensible space and distributed this and other Firewise materials through mass mailings. Lake Oswego Fire has been focused on fire alarms and sprinklers in new construction and emergency preparedness. Fire professionals are invited to speak and provide training in emergency preparedness at Home Owners Association meetings on a regular basis.

Local Communities at Risk (CAR's)

The Lake Oswego Fire Department also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred

to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #23 and listed in Table 10.9-1. Lake Oswego professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Lake Oswego has a very restrictive tree ordinance designed to retain urban canopy for environmental and aesthetic benefits. Currently, homeowners can trim trees and can treat ladder fuels, but cannot cut any trees that are 5 inches or great in diameter. Lake Oswego Fire has worked with the City to consider expanding these provisions for the creation of defensible space on residential properties as well as the natural areas managed by the City adjacent to CAR's. For example, in 2003 a fuels reduction demonstration project was implemented in Cooks Butte Park and the adjacent community. The Spring Brook Park HOA has also been successful in creating defensible space around homes.

Since that time, the City has acquired many more natural areas, but very little has been done to mitigate wildfire hazards in these areas. Lake Oswego Fire recognizes the need to work with the City Planning Department in amending the Tree Ordinance to balance the benefits of urban canopy with the risk to life and property from wildfires.To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Lake Oswego Fire (Map #23).

Fuels Reduction Priorities include:

Iron Mountain Bluff
Spring Brook Park
Waluga Park
Cooks Butte Park
Tryon Creek

Lake Oswego Fire Department Action Plan

Lake Oswego Fire has developed a list of actions to build capacity at the Department scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Lake Oswego Fire and the local CARs therein is provided in Table 10.9-2.

Table 10.9-1. Lake Oswego Local Communities at Risk

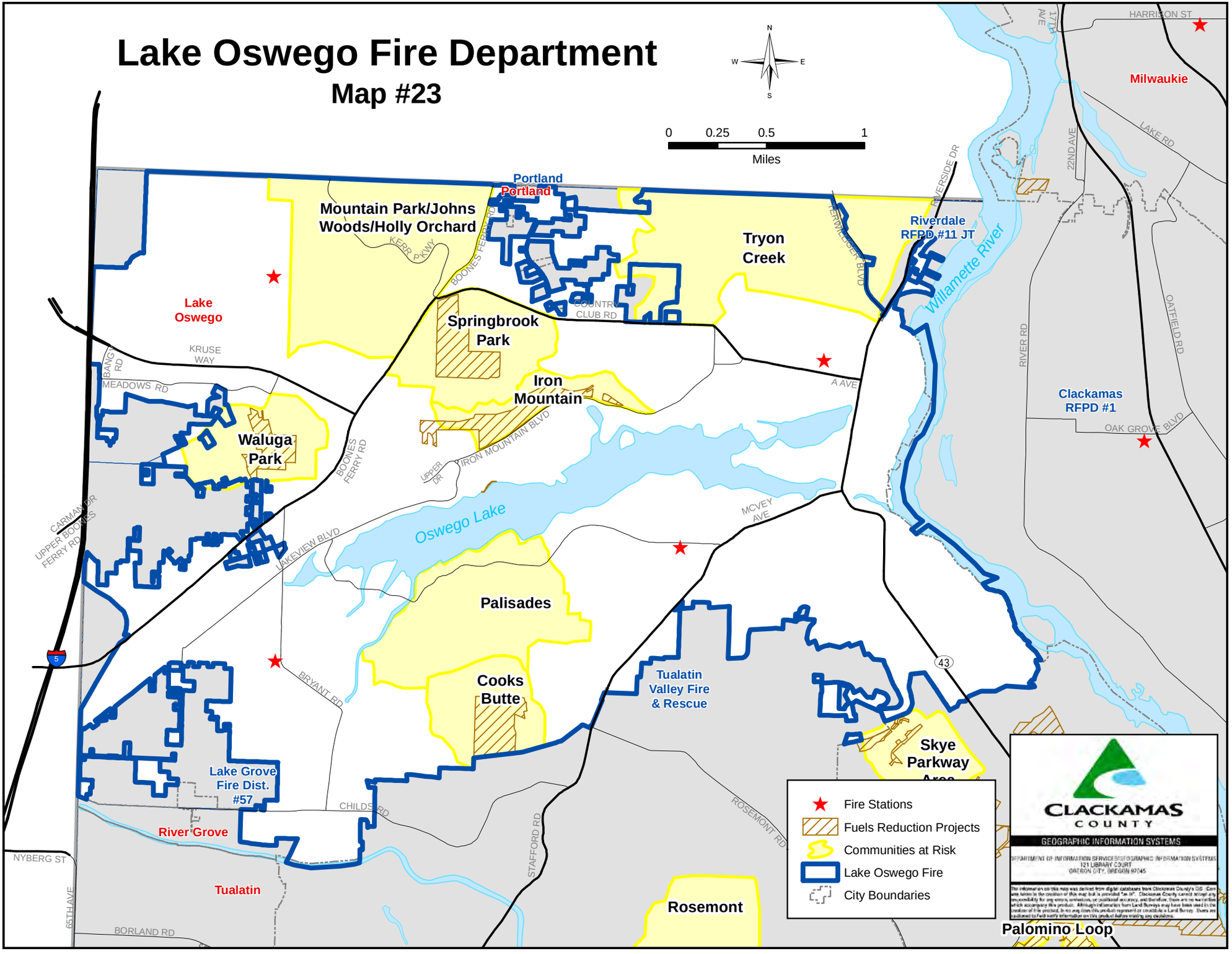
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Lake Oswego Fire Local Communities at Risk													
Iron Mountain Bluff	**High**	X	X	X	X		X	X		X	X	X	The residential area at the top of a Iron Mountain bluff is at risk to wildfire because it there is heavy vegetation and steep slopes which will drive a fire toward the homes. There are a few one way in and out roads in the neighborhood, while, the only roads that would be used for firefighting are one way in and out. The homes need defensible space, and the adjacent city-owned park would benefit from fuels reduction as would the piece that is owned by the Hunt Club . There is a good hydrant system up top and Iron Mtn Blvd. An above ground water main and wildland detectors have been discussed in the past, but no progress has been made toward these efforts. The adjacent parks lands, have had a few ignitions here but LO's effective initial attack has halted major damage here. Protection capabilities are compromised because it is quite a hike and it is steep for response. LO has done a lot of outreach and some residents have expressed interest in reducing wildfire hazards. There has not been a community meeting, but individuals have been concerned about parking and limiting access. Communications by radio is good, but cell phones are spotty.
Palisades	**High**	X								X		X	The homes in this community are close together, are surrounded by heavy vegetation and are on very steep slopes. There is good access, good water and good communications. A focus here is on preparedness and education because this HOA still requires Cedar Shake roofs.
Cooks Butte	**High**	X	X	X	X		X	X		X	X	X	This is the most remote park in LO. It is steep, has poor access on a couple roads, and if a fire were to start here, there is no early notification so response times could be an issue. The community is on the periphery of the Park. Recreators light campfires in the park so it has previously been closed during fire season, but now they just post no burning and let people in during fire season so that there are eyes on the ground. The area has southern exposure, steep slopes and heavy fuels so the park would benefit from FR but not as high a priority as Iron Mountain. There are 2 water reservoirs in the park, and there is a hydrant but it has no pressure. A demonstration project was done here to remove fuels. There are drier flashy fuels on the periphery with a mature forest in the center. The lighter fuels are in interface. There is also a big grass field that the Parks Dept. mows. The residents adjacent to Cooks Butte are not very prepared and people have a perception that it isn't going to burn. Shared fire protection with TVFR.
Mountain Park	**High**	X	X		X		X	X		X		X	The homes in this community are close together, are surrounded by heavy vegetation and are on very steep slopes, ranging from 100 ft to 1000 ft. There are some green belt trails that would provide some limited access for firefighting. A few years ago, the City cleared some of these trails for brush truck access. Priorities for this community are preparedness and defensible space.
Tryon Creek State Park	**Medium**	X	X	X	X		X			X		X	There is a residential area surrounding this State Park. The park has an older stand of mature trees, but defensible space around homes is needed. Access and water are limited here and it is visited by many recreators, which presents some outreach opportunities. Transients also use this park. Lake Oswego Fire shares protection with Portland Fire and they review response strategies annually.
Spring Brook Park	**Medium**	X	X		X		X			X			This community was targeted for a community meeting because LO and Parks thinned the parks property adjacent to the community. Some training on emergency preparedness was done here. Defensible space around the homes is needed. There are lots of trails in the park that could be used for firefighting, but LO doesn't have a lot of equipment for that type of response. Roads aren't bad in this area, slope is gentle and protection capabilities are good. There is a junior high very close which could serve as a staging area.
Waluga Park	**Medium**	X	X	X	X					X		X	There is a residential community adjacent to this city park, which has heavy vegetation and some slope steep slopes near the top. The area is characterized by flashy fuels and ladder fuels leading to heavier fuels.

Table 10.9-2. Lake Oswego Action Plan

Action Item	Timeframe	Partners	CAR
Lake Oswego Fire Action Plan			
Work with City of Lake Oswego to allow exemptions under the Tree Ordinance for creation of defensible space around homes as well as fuels reduction into parks adjacent to Communities at Risk.	Short-Term	City of Lake Oswego, ODF	Lake Oswego Fire
Work with the City of Lake Oswego Building Department to adopt a WUI area in which cedar shake roofing is disallowed.	Short-Term	City of Lake Oswego, ODF	Lake Oswego Fire
Continue annual wildland fire training for Lake Oswego Fire professionals.	Ongoing	ODF	Lake Oswego Fire
Lake Oswego Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability. Solicit feedback on wildfire prevention projects the community would support.	Ongoing	ODF, Lake Oswego Parks	All CAR's
Work with Lake Oswego Parks to reduce hazardous fuels in City Parks adjacent to Communities at Risk.	Ongoing	Lake Oswego parks, ODF	Iron Mtn. Bluff, Cooks Butte, Spring Brook Park, Waluga Park, Mountain Park
Distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	City of Lake Oswego	All CAR's
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in strategic planning areas.	Ongoing	ODF	All CAR's
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All CAR's
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF	All CAR's
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All CAR's

Lake Oswego Fire Department

Map #23



10.10. Community at Risk: Molalla Rural Fire Protection District #73

The Molalla Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Molalla Fire District Description

Molalla Rural Fire Protection District #73 (MRFPD #73) is an Oregon special service district that provides fire suppression, prevention, investigation, public education, rescue, and ambulance transport services. (MRFPD #73) is approximately 101 square miles with an ambulance service area (ASA) of 350 square miles covering a portion of the neighboring fire agencies and the unprotected wilderness area.

The District operates from three stations: Station 82, the headquarter station in the city of Molalla; Station 81, four miles to the north on Highway 213 near the small community of Mulino; and Station 85, five miles south on Sawtell Road. Both the Sawtell and Mulino stations are served by volunteers living in those areas.

Wildland Urban Interface (WUI)

Molalla's Fire District is a rural area on the eastern edge of Clackamas County adjacent to large tracts of federal, state and private forests. The terrain is steep, causing access and communication limitations. The Molalla River Corridor attracts thousands of recreators every year. Campers, hikers, anglers, ATV users, hunters and other visitors to this area can potentially start wildfires that could carry from public land to the residential communities.

This area is characterized by rural residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor address signage. Heavy and continuous fuels dominate this area, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Molalla Fire District.

The Bureau of Land Management, private industrial landowners and small woodland owners have many heavily forested landholdings that are adjacent to homes in the Wildland Urban Interface. As Molalla Fire targets the residential communities for creating defensible space, there is an opportunity to engage private, state and federal partners in reducing fuels on this adjacent public land. This has been identified as an action item.

Molalla Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Molalla Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Molalla Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Molalla Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Molalla Fire works with the City of Molalla and Clackamas County to integrate these concepts at the regulatory level by providing input on access and water requirements for new development.

The City of Molalla contracts with Clackamas County for land use planning and building permit services. This presents some difficulties for the Fire District because the County does not always contact the District for input on fire flow and access for new lots of record. Molalla Fire also does

not have access to the County's Velocity Hall System which catalogues pending and approved building permits. The need for enhanced communication between Clackamas County and Molalla Fire has been noted in the Molalla Fire CWPP Action Plan.

Emergency Response

Emergency response is challenging in the Molalla Fire District because staff are almost entirely volunteer (36), with only 5 paid staff. A major wildland urban interface fire in Molalla would quickly exceed the resources and capabilities of the District. For this reason, Molalla Fire has mutual aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

Although the District is able to support annual wildland fire training (S-130 and S-190), it would like to offer S-215 and S-290 to senior staff. Also, the lack of live fire experience makes it difficult to retain wildland qualifications. Molalla Fire is working directly with NAFT, USFS and ODF and other land mangers to identify and take advantage of opportunities to participate in live fires.

Because Molalla Fire has does not have a hydrant system that extends to rural areas, it is important to begin identifying and improving potential water sites. This is especially important for homes that have long narrow driveways that will not support water tenders. ODF has been working with Molalla Fire to improve address signage in the many of the most vulnerable areas and potential water sites could be added to these signs.

In the event of a large widlland fire, evacuations may be necessary. This rural area presents some difficulties due to the large number of one way in and one way out roads with poor addressing. Molalla Fire has been working with ODF to improve address signage in vulnerable areas, and will continue to work with the Clackamas County Fire Co-op to implement address signage in the Communities at Risk. There have also been changes to the road system that are not currently reflected in County maps such as Boyles and Iromer Roads. More coordination and outreach is also needed to ensure that evacuation procedures are developed and understood.

Burning of yard waste and debris is challenging in the Molalla Fire District because backyard burning is allowed in all areas. Molalla Fire tries to be consistent with neighboring jurisdictions' Backyard Burning programs but does not have staff or resources to strictly regulate burning in Molalla. The District is also home to many Christmas tree operations that have authority to burn an incredible amount of material all year long regardless of fire severity or air quality restrictions. Molalla Fire would like to work with ODF to develop a better strategy for dealing with Christmas tree waste such as a chipper cooperative.

Community Outreach & Education

Molalla Fire is dedicated to fire prevention, but has limited staff and capacity for a widland fire outreach program. Molalla Fire is a member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, community and school programs, and fire safety house displays. Molalla Fire would like to increase capacity in its outreach program for fire prevention and for recruiting potential volunteers.

Local Communities at Risk (CAR's)

Molalla Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic

Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map#24 and listed in Table 10.10-1. Molalla Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Molalla Fire will facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Molalla Fire (Map# 24).

Fuels Reduction Priorities include:

Sawtell Road
Salo Oaks
Blue Road

Molalla Fire District Action Plan

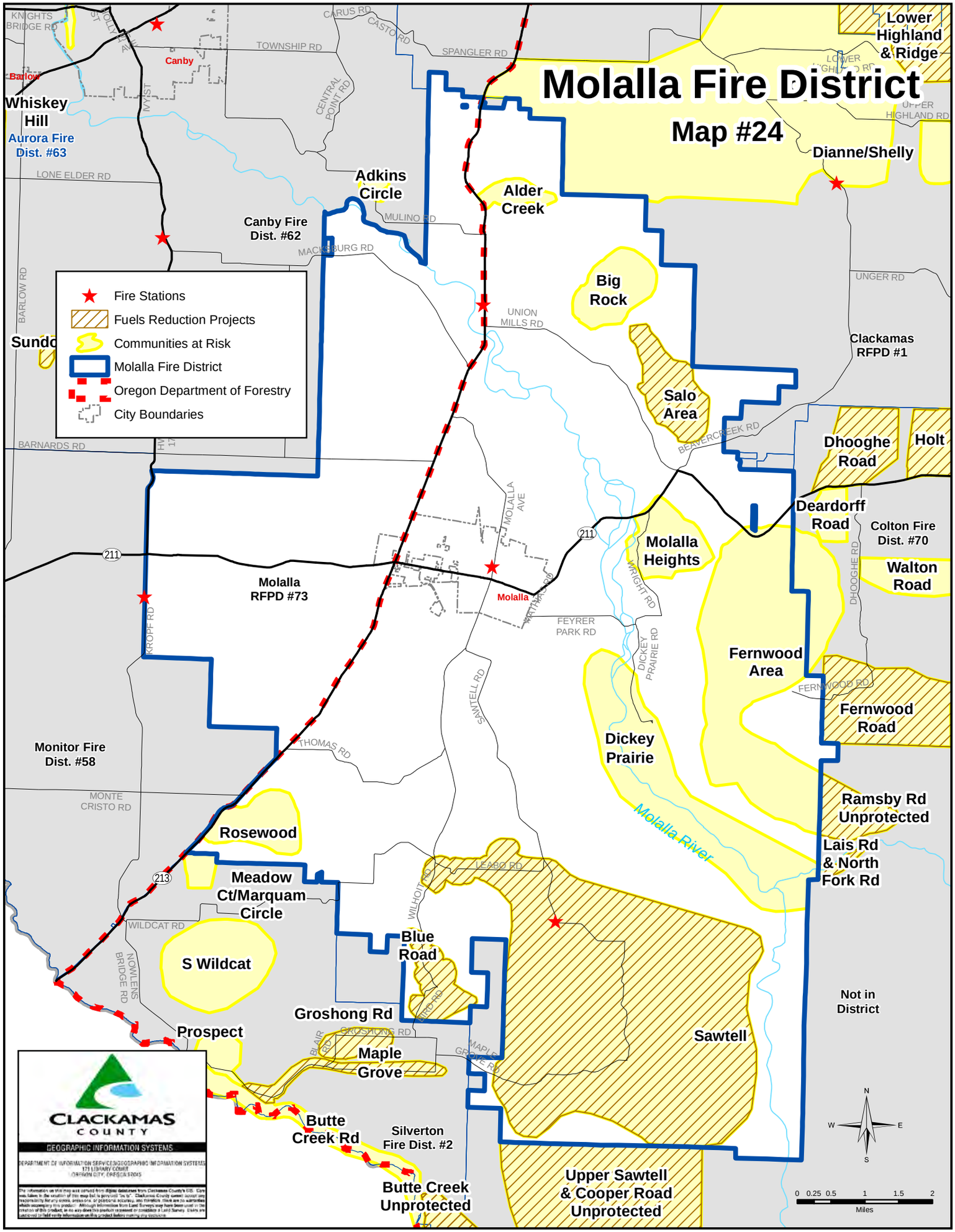
Molalla Fire has developed a list of actions to build capacity at the District scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Molalla Fire and the local CARs therein is provided in Table 10.10-2.

Table 10.10-1. Molalla Fire District Local Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Molalla Fire Communities at Risk													
Rosewood	**High**	X	X	X	X		X	X	X	X	X	X	The Rosewood Community is densely populated with homes located at the top of a very steep, vegetated slope. There are major access limitations here, as Colmer Creek does is no longer a through road. There is a lot of poison oak on private lands as well as the adjacent heavily forested BLM land. Many local residents use ATV's here and there have been instances of teenagers starting fires. There are also homemade saunas that tend to burn down. Residents of this community burn yard debris all year long,
Alder Creek	**High**	X	X	X	X	X		X	X	X	X	X	The Alder Creek Community is on a steep, very narrow dirt road. There are water limitations here and the landscape is heavily forested. Burning is an issue here and the community is not aware of the high wildfire hazards.
Sawtell Trout creek/Lebo/Novak/ Hardy. Maplegrove Road	**High**	X	X	X	X	X	X	X	X	X	X	X	This is a large community in eastern Molalla that extends beyond the Molalla RFPD boundary, so some homes are actually unprotected. Access is limited throughout this area, as Hardy, Leabo, Hibbard,Appleman and Maple Grove Road are one way in and out. Steiner's Pond is a draft site and Deardorf has a huge lake that could be used as a watering site. Trout Creek and Hardy Roads have interrupted radio coverage. ATV users, transients, and other recreators accessing the Molalla River Corridor are potential ignition sources. Also, it takes 30 minutes to get to the end of it, so protection capabilities are compromised.
Dickey Prairie Road	**High**	X	X	X	X	X	X	X	X	X	X	X	The Dickey Prairie area is characterized by dense homes, heavy timber, and limited access and water supply. The forest road between Adams road and Dickey Prairie is in very poor condition, The City's Water Works Plant intake is also located here. Weyerhaeuser industrial first land is adjacent to Dickey Prairie.
Molalla Heights	**High**	X	X	X	X	X		X	X	X	X	X	The Molalla Heights Community has limited access and the closest water draft site is at the bridge which is difficult to get to. Homes are in need of defensible space. The rock pit here is very active which provides potential ignition sources.
Fernwood Road/Ramsby/ Munson/Callahan	**Medium**	X	X	X		X	X	X	X	X	X	X	The Fernwood Area is a steep canyon that drives fire up the steep slope towards homes. There was a fire here about 10 years ago that did just this and was very difficult to fight. There is heavy vegetation and limited access with tight windy driveways and lots of foliage overhanging. It is about 20 minutes from a fire station. Recreators and transients use this area frequently because it is near a forest road.
Blue Road	**Medium**	X	X	X	X	X		X	X	X	X	X	Blue Road has very limited access and heavy vegetation. There are only a few homes here, but that are overgrown and are adjacent to private and public forest land. Water is an issue here and it would require a longer response time.
Big Rock Loop	**Medium**	X	X		X	X	X	X	X	X	X	X	Big Rock Loop is vulnerable because there is heavy vegetation and no defensible space around homes. There is a potential water source, but accessing the water source is an issue. Many recreators use this area for ATV's , shooting, campfires and other activities that could provide an ignition source. It is also adjacent to steep BLM forest land.
Salo Royal Oaks	**Medium**	X	X	X		X		X	X	X	X	X	Salo Royal Oaks has steep, narrow access with very little defensible space around homes. There is poison oak here as well, and no water supply.

Table 10.10-2. Molalla Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Molalla Fire Action Plan			
Secure funding to develop a marketing campaign that utilizes social media outlets to build support and capacity for the Molalla Fire District (volunteer recruitment, community support, fund raising).	3-5 years	Fire Co-op	Molalla Fire District
Identify opportunities to engage young adults in community service and wildfire prevention projects.	2 years	Molalla High School	Molalla Fire District
Pursue grant funding to purchase Wildland PPE to replace outdated PPE.	2 Years	FDB, ODF	Molalla Fire District
Identify and pursue opportunities to provide Incident Management Training for firefighters that will be Incident Commanders on larger scale emergencies.	Ongoing	FDB, CCEM, NAFT	Molalla Fire District
Identify and pursue opportunities to participate in prescribed burns and live fire training to update and maintain wildfire certifications.	Ongoing	ODF, BLM	Molalla Fire District
Partner with the Clackamas County Fire Defense Board to participate in a WUI conflagration exercise.	2 Years	Clackamas Fire Defense Board	Molalla Fire District
Work more closely with Clackamas County DTD to ensure input on access and water is requested and received in a timely manner, including access to the velocity hall system.	Ongoing	SFMO, Clackamas DTD	Molalla Fire District
Develop rural water supplies and in areas that do not have hydrants and are difficult to access.	3-5 Years	ODF	Molalla Fire District
Work with local Christmas Tree growers to develop and implement a chipper program to reduce excessive burning of woody material.	2 Years	ODF, CCFA	Molalla Fire District
Work with Clackamas County to develop accurate maps for roads in the District that have significantly changed, including Boyles and Cromer Roads.	3-5 Years	County DTD	Molalla Fire District
Molalla Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural ignitability. Solicit feedback on wildfire prevention projects the community would support.	2 Years	ODF	Rosewood
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	2 Years	Fire Co-op	All CAR's
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All CAR's
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in Communities at Risk.	2 Years	ODF	All CAR's
Implement road addressing (including length of driveways) and other signage for emergency response.	2 Years	ODF	All CAR's
Work with industrial and public forest land holders to reduce fuels on private and federal land adjacent to CAR's.	3 years	ODF, BLM, Weyerhaeuser, Port Blakely	All CAR's
Conduct Community Clean Up Days to reduce hazardous fuels. Identify opportunities to recycle or compost vegetative material instead of burning.	2 Years	ODF	All CAR's


Molalla Fire District
Map #24
Fire Stations
Fuels Reduction Projects
Communities at Risk
Molalla Fire District
Oregon Department of Forestry
City Boundaries
Lower Highland & Ridge
Dianne/Shelly
Whiskey Hill
Aurora Fire Dist. #63
Barlow
Canby
Adkins Circle
Alder Creek
Canby Fire Dist. #62
Big Rock
Sundo
Clackamas RFPD #1
Salo Area
Dhooghe Road
Holt
Deardorff Road
Colton Fire Dist. #70
Molalla Heights
Walton Road
Molalla RFPD #73
Molalla
Fernwood Area
Fernwood Road
Dickey Prairie
Monitor Fire Dist. #58
Ramsby Rd Unprotected
Molalla River
Lais Rd & North Fork Rd
Rosewood
Meadow Ct/Marquam Circle
S Wildcat
Blue Road
Not in District
Groshong Rd
Prospect
Sawtell
Maple Grove
Butte Creek Rd
Silverton Fire Dist. #2
Butte Creek Unprotected
Upper Sawtell & Cooper Road Unprotected
KNIGHTS BRIDGE RD
TOWNSHIP RD
CARUS RD
CASTO RD
SPANGLER RD
LOWER HIGHLAND RD
UPPER HIGHLAND RD
CENTRAL POINT RD
LONE ELDER RD
MULINO RD
MACKSBURG RD
UNGER RD
UNION MILLS RD
BARLOW RD
BEAVERCREEK RD
BARNARDS RD
MOLALLA AVE
WRIGHT RD
FEYRER PARK RD
DICKEY PRAIRIE RD
DHOOGHE RD
FERNWOOD RD
KROPP RD
SAWTELL RD
THOMAS RD
MONTE CRISTO RD
LEABO RD
WILHOIT RD
WILDCAT RD
NOWLENS BRIDGE RD
BIRCH RD
GROSHONG RD
BLAIR RD
MAPLE GROVE RD
211
213
CLACKAMAS COUNTY
GEOGRAPHIC INFORMATION SYSTEMS
DEPARTMENT OF INFORMATION SERVICES/GEOGRAPHIC INFORMATION SYSTEMS
121 LIBRARY COURT
OREGON CITY, OREGON 97045
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Miles

10.11. Community at Risk: Monitor Rural Fire Protection District #58

The Monitor Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Monitor Fire District Description

The Monitor Fire District is a very rural, primarily agricultural area. The District is completely volunteer, so response times are dependent on the availability of volunteers (many of whom are not available during the work day). The community is very supportive of the Fire District, as demonstrated by the five-year Local Option Levy that recently purchased two new engines. The District also has two retired forest service vehicles that are used as brush trucks. Monitor Fire averages about 200 calls a year and operates from two stations on Kropff Road and Woodburn Monitor Road.

Wildland Urban Interface (WUI)

Monitor's Fire District is an agricultural area in southern Clackamas County. It is a relatively flat area, with good access and radio coverage. There is not much of a wildland urban interface in Monitor, because the majority of heavy fuels occurring along the rivers and streams and there are very few homes located in these areas. The homes that are near wooded riparian areas and wetlands have typically have defensible space around them. The primary threat of wildland fire ignition would be from an escaped agricultural burn. The Elliot Prairie area is the highest concentration of homes, but fuels are not heavy enough to warrant a Community at Risk designation.

Clackamas County developed a Wildland Urban Interface Map based on housing density and fuel types. Although there is not a great deal of localized wildfire hazard in Monitor, there are some areas that met the criteria for being including in the Countywide Wildand Urban Interface as illustrated by Map #25 Monitor Fire District Wildland Urban Interface.

Monitor Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Monitor Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 of the Clackamas CWPP illustrates the overall wildfire hazard risk in the Monitor Fire District and can be used to help target areas for wildfire prevention activities.

Structural Ignitability

Monitor Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness as much as possible. However, with very limited staffing, there is very little communication with the Clackamas Department of Transportation and Development, which provides land use planning and building services in this area. Because protection capabilities are so limited here, Monitor Fire promotes home sprinkler systems, especially in homes that are greater than 3,600 square feet in area. Monitor Fire does not participate in land use reviews, and currently works with individual homeowner or contractors during development to ensure adequate access and fire flow. The District does not receive monthly notifications of new building permits and has not been trained on velocity hall. This has been noted in the Monitor Fire CWPP Action Plan.

Emergency Response

Emergency response is challenging in the Monitor Fire District because staff is entirely volunteer and ranges from 26 to 32 firefighters, depending on turnover. A major wildland urban interface fire in Monitor would quickly exceed the resources and capabilities of the District. For this reason, Monitor Fire has mutual aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

Monitor Fire has an excellent training program for a volunteer Fire District, and the majority of volunteers are DPSST certified as Wildand Urban Interface Firefighters. Turnover is always an issue, so training new volunteers can be challenging. Monitor Fire would like to strengthen its relationship with the ODF by attending training (S-130, S-190) to assist in maintaining wildfire qualifications. The District is also in need of new wildland Personal Protective Equipment including Nomex pants, shirts and new generation live fire shelters.

Address signage is an issue throughout the District. ODF is assisting by addressing the highest priority roads in the Summer of 2012, and will continue to work with Monitor Fire to improve address signage.

Although there is a great deal of agricultural burning in this area, the majority of farmers are well-versed in safe burning practices. Access is good throughout the District, with very few single access roads. Radio and cell phone communication is also good. The District just received six used 800 MHz radios from Canby Fire, which improves interoperability with other mutual aid partners. Each vehicle is now equipped with an 800 MHz and a VHF radio. As the County moves toward narrow banding and higher frequencies, overall the coverage and quality of communication in rural areas such as Monitor capabilities are diminished and in more repeaters may be needed.

Community Outreach & Education

Monitor Fire is dedicated to fire prevention, but has limited staff and capacity for a fire prevention program. The District incorporates fire prevention messaging into all outreach programs including fire station open house, pancake breakfasts and national night out. Currently, the prevention messages target youth, and presentations are given at Butte Creek School and Canby Elementary on Whiskey Hill annually. Monitor Fire would like to increase capacity in its outreach program for fire prevention and for recruiting potential volunteers.

Local Communities at Risk (Strategic Planning Areas)

Monitor Fire has not identified any Communities at Risk to wildfire. Elliot Prairie is the only concentration of homes, but fuels here do not constitute a high wildfire risk.

Fuels Reduction

A core focus of the Clackamas County Community Wildfire Protection Plan (CCWPP) reducing hazardous fuels around homes, along transportation corridors and in surrounding forested lands can significantly minimize losses to life, property, and natural resources from wildfire. Heavy Fuels in the Monitor Fire District are concentrated along wetland and riparian areas, but there are very few homes or infrastructure at risk. There have been no areas identified as potential fuels reduction project sites.

MonitorFire District Action Plan

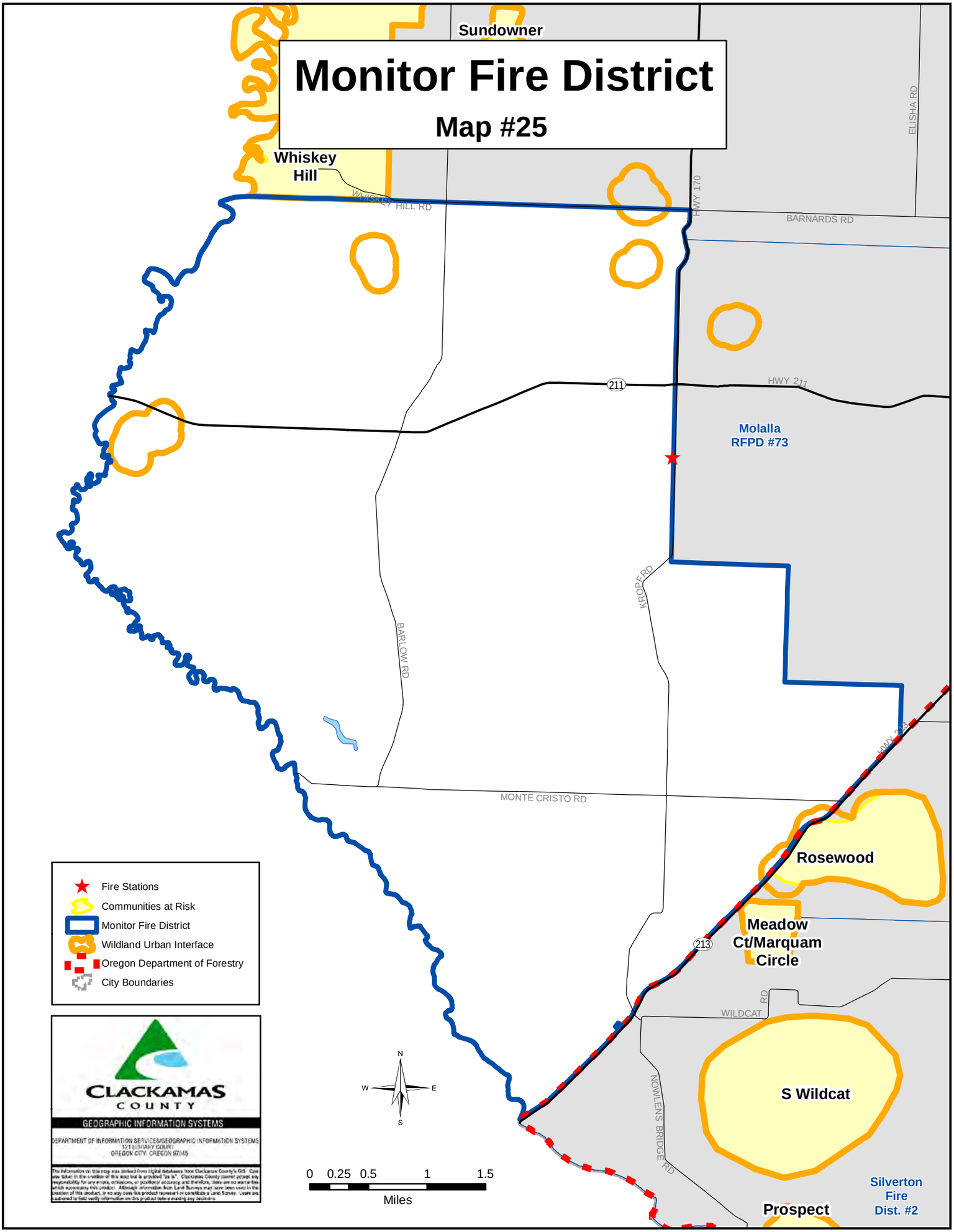
Monitor Fire has developed a list of actions to build capacity for potential widlland fires at the District scale. The action plan for Monitor Fire is provided in Table 10.11-1.

Table 10.11-1. Monitor Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Monitor Fire Action Plan			
Pursue grant funding to purchase Wildland PPE to replace outdated PPE.	2 Years	FDB, ODF	Monitor Fire District
Work more closely with Clackamas County DTD to ensure input on access and water is requested and received in a timely manner, including access to the velocity hall system.	Ongoing	SFMO, Clackamas DTD	Monitor Fire District
Partner with ODF to receive wildland fire training training (S-130, S-190)for maintaining wildfire qualifications.	2 Years	ODF	Monitor Fire District
Continue to improve address signage throughout the District.	2 Years	ODF,Fire Co-op	Monitor Fire District
Partner with ODF and the Clackamas County Fire Cooperative to increase capacity in the fire prevention and outreach program.	Ongoing	Fire Co-op	Monitor Fire District

Monitor Fire District

Map #25



10.12. Community at Risk: Sandy Rural Fire Protection District #72

The Sandy Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Sandy Fire District Description

Sandy is a scenic community with beautiful mountain views, the Sandy and Bull Run Rivers, and is home to a major portion of the historic Barlow Road of the Oregon Trail. Residents enjoy a mild climate, clean air, good water and advantages of living in a small town while living only 45 minutes from downtown Portland. The community is largely built in the Wildland Urban Interface (WUI).

Sandy's heritage is logging and sawmilling. There are several nurseries and berry farms with millions of dollars of assets and inventory, and many jobs. There are several light industries including construction and steel work, plastic injection molding, auto sales and service, and fuel facilities. The Oregon Trail School District operates seven facilities within the fire district that are major assets for the community as well as being, perhaps, the largest single employer in the area.

Sandy Fire District #72 protects a 77 square mile district with a population of approximately 17,000 including the City of Sandy, which is just over 2 square miles and a population of approximately 6500. It serves the community with 15 career personnel and 50 volunteers. The District is a rural fire district governed by an elected board of directors and is well supported by its patrons.

Sandy is adjacent to federal, state, and local recreational lands. The rivers in the area are well known for their fishing and boating, and the surrounding forest lands offer a variety of recreational possibilities.

The Bull Run Watershed is accessed through the fire district. Sandy Fire provides mutual aid to the City of Portland as first-in responders into the Bull Run. US Highway 26 bisects the district and is a major transportation route between the Portland area and central/eastern Oregon. 31,000 vehicles travel through Sandy each day.

Wildland Urban Interface (WUI)

The topography of the Sandy Fire District, like most areas in Oregon, is quite diverse. The southern and eastern borders of the District are mostly forested land and the southwest border is the Deep Creek canyon. The Sandy River canyon, which is quite steep and picturesque, dissects the center of the District, and creates an access problem for the Northern area of the District as well as an interface problem with the steep southern bluffs bordering city residential areas. All of these canyons are forested and have homes built sporadically throughout. This combination of homes, steep grades and trees pose a significant wildland interface problem. This topography also impacts communication systems because of slopes and mountains that can block radio and cellular telephone signals.

The remainder of the District ranges from gentle hills to relatively flat areas. These areas consist of a combination of farms, homes and businesses. The nursery business is a major part of local agriculture. There is also a variety of forest lands and natural areas; from thick stands of second growth timber to open grass lands. In addition, public and private management of the surrounding timber lands creates a patchwork of various stages of growth which includes dealing with clean up of slash of logged timber land and re-seeding projects.

Tourism and recreation are also huge influences here, with thousands of Portland area residents travelling along Highway 26 to access the Mount Hood National Forest. Campers, hikers, hunters and other visitors to this area can potentially start wildfires that could carry from public land to the residential communities.

Sandy Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Sandy Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Sandy Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Sandy Fire promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. Sandy Fire works well with the City of Sandy and Clackamas County to integrate these concepts at the regulatory level. Also, Sandy Fire participates in land use reviews for new development to provide input on access and water supply.

Since the adoption of the county-wide driveway standard, private driveways are being installed that are designed to allow fire engine access. There are several pre-existing private driveways that pose access difficulties. These difficulties include inadequate turning radiuses, steep grades, inadequate vegetation clearance, inadequately designed bridges and driveways that will not withstand the weight of a fire engine, especially during the wet season. In most of these cases response times are increased.

Approximately 30% of the District is served by public water systems. There are 7 water districts serving the District. The major district is the City of Sandy. Other smaller districts include Skyview Acres Water District, Pleasant Home Water District, and Latigo Hills Water District.

Fire flows in the City of Sandy have improved tremendously over the past decade. The City has added another water reservoir, for a total storage capacity of 3.75 million gallons, and has added larger distribution mains to increase available fire flow for much of the City. Its water sources are capable of producing 3 million gallons per day. The City has also identified how the system will grow with new development.

The remaining water districts serve primarily rural residential communities and for the most part are inadequate for providing fire flow. The remaining 70% of the District uses well water for domestic use. Fire District water tenders provide fire flow for these areas. The water tenders also augment fire flow in hydrated areas if fire flow is inadequate.

The District has developed strategically located static water sources (ponds and cisterns) in rural areas of the District to assist in fire flow requirements. These drafting locations are documented in fire apparatus in a book with a description and photos of the site.

For the most part, the transportation system in the District is adequate. Typically, there are few problems that can be directed towards transportation inadequacy, though congestion on Hwy 26 through downtown Sandy is becoming an ever increasing problem at certain times of the day and days of the week. Hwy 26 is a corridor for recreational activities on Mt. Hood and in Central Oregon. Funding for maintenance and improvements has shown to be inadequate for the past few years and will continue to be inadequate if sources of funding are not addressed. The City of Sandy recently passed a penny per gallon gas tax that has proven to provide a modest but reliable revenue source to the City for local street repair. Clackamas County has undertaken a project called

"Concurrency" to further address these issues. Should this trend continue, congestion or the quality of some roads might be an obstacle to emergency response times.

Emergency Response

Sandy Fire Professionals are very well-trained for wildland fires with an annual training regime that supports task forces and strike teams which are called upon to respond to local wildfires as well as conflagrations. Although the District is able to support the S-130 and S-190 training, lack of hands-on fire experience makes it difficult to retain wildland qualifications. Sandy Fire would like to work more directly with the USFS and ODF to have opportunities to participate in live fires, and this is noted in the action plan.

The District has two dedicated brush engines; one of which will need replacing in next 5 years. The District is in need of fire shelters and has other equipment needs, which are documented in the Sandy CWPP Action Plan. The population is dispersed, which can result in increased response times to outer reaches of the District.

Because Sandy Fire is a relatively small fire district, a major wildland urban interface fire in Sandy would quickly exceed the resources and capabilities of the District. For this reason, Sandy Fire has Mutual Aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

In the event of a large widlland fire, evacuations may be necessary. This rural area presents some difficulties due to the number of residential properties that can only be accessed by one way in and one way out roads. Also, there are many private bridges in the area that may not be able to support emergency service vehicles.

Burning of yard waste and debris is challenging in the Sandy Fire District because burning is allowed in all areas. Sandy Fire adheres to the Open Burn Policy adopted by the Fire Defense Board and tries to be consistent with neighboring jurisdictions in regulating the Backyard Burning program.

Community Outreach & Education

Sandy Fire is dedicated to fire prevention, and uses a variety of forums to promote residential fire safety, defensible space, and safe burning practices. The community is very supportive of the Fire District and participates in activities throughout the year, some of which include smoke detector, fire prevention, car seat, and other programs. Sandy Fire is also an active member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, community and school programs, and fire safety house displays.

Several community members participated in the meeting for the 2005 iteration of the CCWPP and are committed to implementing its goals and objectives. Two additional community meetings have been held since 2005 to discuss community volunteers helping with address confirmation, assessing driveway conditions and risk assessments of homes in the Bull Run CPO. Our CERT team members commit to several hours of training and will also be active participants in the implementation of the Sandy CWPP.

Local Communities at Risk (CAR's)

Sandy Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #26 and listed in Table 10.12-1. Sandy Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Sandy Fire will facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Sandy Fire (Map #26).

Fuels Reduction Priorities include:

Cedar Creek
Bull Run Watershed
Wildcat Mountain
Sandy River Park Area

Sandy Fire District Action Plan

Sandy Fire has developed a list of actions to build capacity at the District scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Sandy Fire and the local CARs therein is provided in Table 10.12-2.

Table 10.12-1. Sandy Fire District Local Communities at Risk

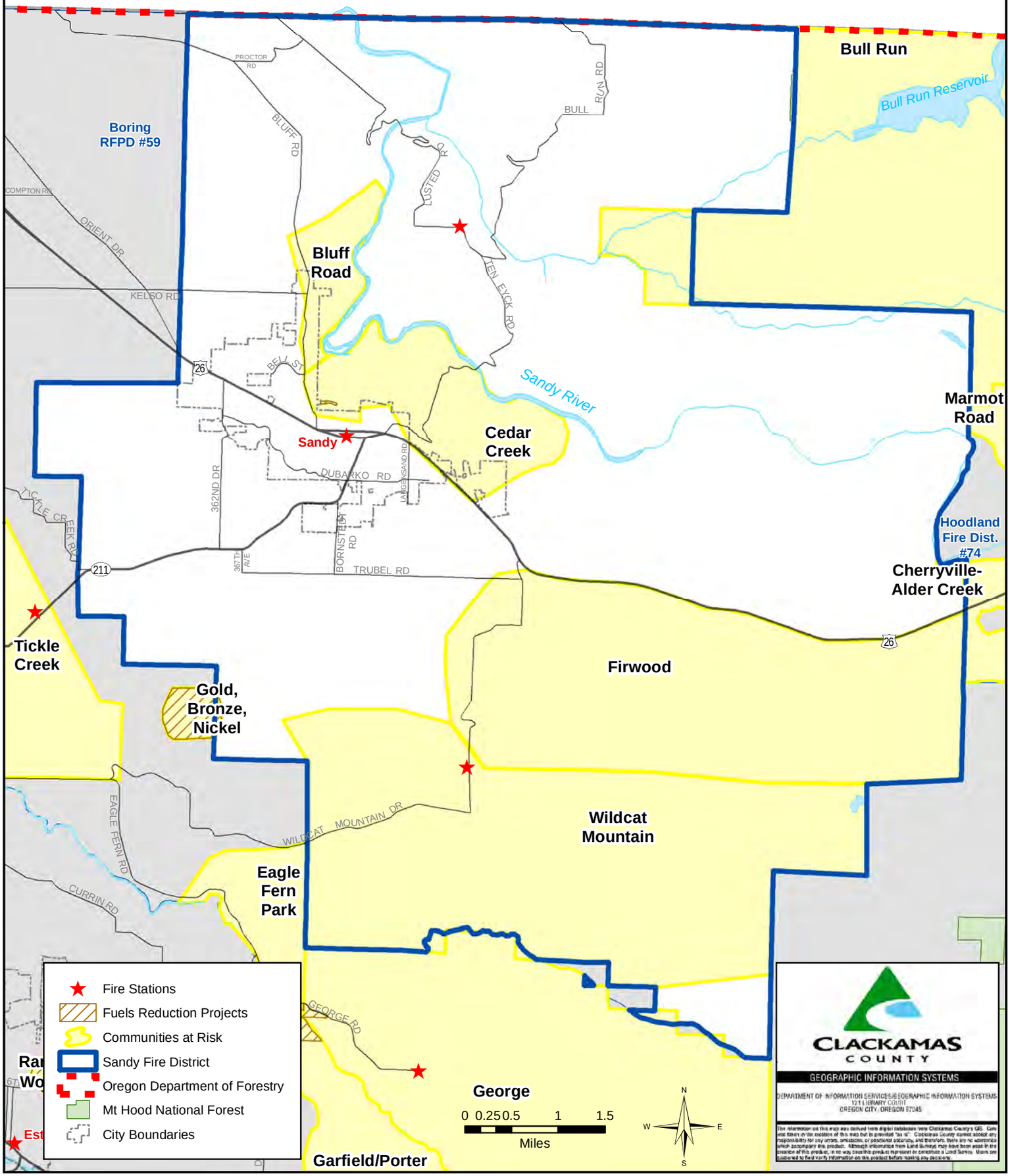
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Sandy Fire District Communities at Risk													
Wildcat Mountain	**High**	X	X	X	X	X	X	X	X	X		X	This community borders BLM, USFS, and industrial forestland on the southern end of the District. Access is very limited only here to one way in and out. Residents are interested in another access point to get from Wildcat Mtn. Road to Paugh road; opportunities include either gating a road through private property or potentially using a Frères logging road. There are also some very narrow and overgrown roads. Outreach, defensible space and outreach are priorities here.
Cedar Creek	**High**	X	X	X	X	X	X	X	X	X	X	X	This residential area is in a heavily forested area on a steep slope on the northern edge of the City. The residential area is adjacent to a City Park that was logged and now is second growth; the old high school is also located here and owns a small portion of adjacent forest land while the remainder is and private forest land. The majority of homes, the High school and the heart of the City of Sandy are all located at top of this steep slope. Access is generally good to the residential areas, but poor to the forest. There is an ATV road in the forest but response here would require a great deal of footwork to get crews. Bridges over Cedar Creek are not engineered for tenders. However, one bridge that served 3 homes served was engineered to withstand 60,000 pounds at the request of Sandy Fire. All water would have to be brought in and Cedar Creek could also be a potential water source. Home addressing is not consistent here. Communications are somewhat poor for 800 here, but VHF and 800 Simplex are good. Residents do burn here, but there have not been very many escapements.
Fir Wood	**High**	X	X	X		X		X		X		X	This agricultural community is comprised of nurseries, berry farms and tree farms. The access is not bad, but the topography does present challenges in some areas. Generally, this community is not as steep as the other CARS. There is a great need for defensible space here. There is a 30,000 gallon tank at the Firwood fire station, and some ponds throughout the area that could potentially be used as helicopter dip spots, but water would probably need to be brought in by truck. Firwood is an all volunteer station so the main station would likely be first on scene. There is a lot of burning here, but very little problems resulting from it. Communications are good because nearby Linhart Butte Road is a C-800 transmitter site.
Bull Run Area	**High**	X	X	X	X	X	X	X		X		X	This watershed is a large forested area owned by USFS but managed by the Portland Water Bureau that straddles Sandy fire and Corbett Fire in adjacent Multnomah County. This area is also identified as a CAR in the Multnomah County CWPP. The head works and other infrastructure is served by the Sandy Fire District via a direct mutual aid agreement with the City of Portland. Sandy fire is also the first responder on medical calls here. One of the issues here is protection capability because public access is prohibited so early detection is difficult, and once notified, it takes Sandy about 15 minutes to arrive. There was a fire here in 2009 and the 2011 Dollar Lake Fire on the Mt Hood National Forest also made it within 2 miles of the Bull Run. Camps Namanu and Camp Howard are private camps here; Camp Howard was treated for Fuels in 2011. The evacuation route out of Namanuis overgrown and could use fire break as well as fuels reduction around the camp structures. The Bull Run watershed would benefit greatly from fuels reduction throughout the watershed to protect this valuable resource from catastrophic wildfire. Access fairly good but it takes a while to respond because they are narrow and curved. Some residential neighborhoods have gravel roads. Communication is good here. Recreators may be an issue in the summer months. Community members have some awareness because firefighters completed structural triage in some locations, but this needs to be done again. Camp Howard has good water supply and the Aims Community Church has good water, but water would need to be carried everywhere else.
Bluff Road	**High**	X	X		X	X	X	X		X		X	The Bluff Road area is extremely steep, nearly vertical, with dense vegetation connecting the canyon to upper Bluff Road. There is a scenic viewpoint at the top so there is heavy traffic here. There are homes at the bottom of the canyon and at the top. There is the potential for big fire from the large trees there that can make a run up toward the homes. The topography would make response efforts challenging. The topography runs to the west from the Sandy River to Bluff Road. There is water here and hydrants are going to be improved by purchasing water from Bull Run. Addressing here is good.

Table 10.12-2. Sandy Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Sandy Fire Action Plan			
Inventor private bridges to determine whether or not they have had an engineer certification and encourage landowners to upgrade them to	Long-Term	Clackamas County, CCEM	Sandy Fire District
Develop a working relationship with natural land managers including Sandy Parks, USFS, and the BLM to address wildfire hazards and	Short-Term	Sandy Parks, USFS, BLM	Sandy Fire District
Work with Clackamas County Emergency Management and the Sherriff's Office to discuss evacuation planning especially in	Short-Term	CCSO, CCEM	Sandy Fire District
Develop and implement a driveway program to ensure that driveways are wide enough with adequate clearance for emergency service vehicles.	Long-Term	CCEM, DTD	Sandy Fire District
Replace the one of Sandy Fire's brush engines in 5 year.	Long-Term	ODF, USFS	Sandy Fire District
Procure fire shelters and other wildland PPE for staff and volunteers.	Ongoing	ODF	Sandy Fire District
Sandy Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, and measures that can be taken to reduce structural	Ongoing	ODF	Wildcat Mtn/ All
Work with the City of Portland Water Bureau to create fire breaks along roads, shaded fuel breaks and other fuels reduction strategies	Short-Term	City of Portland Water Bureau, ODF, USFS, Corbett	Bull Run
Develop a working relationship with natural land managers including Sandy Parks, USFS, BLM and the Portland Water Bureau to address	Short-Term	Sandy Parks, USFS, BLM	Cedar Creek, Wildcat Man, Bull Run
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF	Firwood Cedar Creek Wildcat Mtn.
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and	Ongoing	Fire Co-op	All
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend	Ongoing	ODOT, Clackamas County Roads	All
Obtain structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in	Ongoing	ODF	All
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for	Ongoing	Clackamas County Emergency Management	All
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All
Conduct Community Clean Up Days to reduce hazardous fuels.	Ongoing	ODF, Metro	All

Sandy Fire District

Map #26



10.13. Community at Risk: Silverton Rural Fire Protection District #2

The Silverton Fire District has been identified as a Community at Risk (CAR) by Oregon Department of Forestry. The District has participated in the Clackamas County Community Wildfire Protection Plan (CWPP) planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Silverton Fire District Description

The Silverton Rural Fire Protection District #2 is a nearly all volunteer District that provides emergency medical services as well as fire services to an area of about 106 square miles and serves a population of over 18,880 from five stations. The current staff consists of seven full time employees, and over seventy volunteers. Both volunteers and paid staff work under the direction of the Fire Chief.

Wildland Urban Interface (WUI)

Silverton is the location of the largest widlland fire in Oregon's history, burning over 1 million acres of timber in 1865. There have been few large fires since then, which has led to heavy fuel loading that could cause another large fire to ignite.

Silverton's Fire District is a rural area on the eastern edge of Clackamas County adjacent to large tracts of federal, state and private forests. The terrain is steep, causing access and communication limitations. The area attracts campers, hikers, anglers, ATV users, hunters and other visitors the diverse use of the area which can potentially start wildfires that could carry from public land to the residential communities.

The area is characterized by rural residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only single access (one way in and one way out) with narrow, steep driveways and poor address signage. Heavy and continuous fuels dominate this area, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the Silverton Fire District.

Silverton Fire District Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted Silverton Fire in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the Silverton Fire District and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

Silverton Fire District promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. The Silverton Fire District works with the City of Silverton, the City of Scotts Mills and Clackamas County to integrate these concepts at the regulatory level by providing input on access and water requirements for new development.

The City of Silverton provides land use planning and building permit services within the city. Coordination with the City is excellent, as the City Planner is also a volunteer firefighter. Unincorporated areas are served by Clackamas County Land Use Planning and Building Depts. Silverton Fire has experienced some difficulties coordinating with the County, and is not always notified to provide information on fire flow and access for new lots of record. Additionally, many homes are being built on existing lots of record with no input from the Fire District on access and water. This issue has been identified as a County-wide issue and therefore is articulated as a need in the Clackamas CWPP Action Plan. Silverton Fire also does not have access to the County's Velocity

Hall System which catalogues pending and approved building permits. The need for enhanced communication between Clackamas County and Silverton Fire has been noted in the Silverton Fire CWPP Action Plan.

Emergency Response

Emergency response is challenging in the Silverton Fire District because staff are almost entirely volunteer, with only 7 paid staff. A major wildland urban interface fire in Silverton would quickly exceed the resources and capabilities of the District. For this reason, Silverton Fire has mutual aid agreements in place which allows for the sharing of resources across the county in the event of a large scale disaster including wildfires.

The Silverton Fire District is able to support annual wildland fire training (S-130, S-190, S-13 as well as all others required for engine boss), and works with local farmers to implement prescribed burns that provide the live fire experience critical to retaining wildland qualifications.

During a multi-agency response, interoperability is going to be an issue for Silverton Fire because their used 800 MHz radios are poor quality; many of which do not display radio frequencies. The District is also in need of 85 new generation fire shelters. Silverton Fire has applied for VFA and RFA grants multiple times to fill District need, but has not yet been successful.

Because Silverton Fire District does not have a hydrant system that extends to rural areas, it is important to begin identifying and improving potential water sites. This is especially important for homes that have long narrow driveways that will not support water tenders.

In the event of a large widlland fire, evacuations may be necessary. This rural area presents some difficulties due to the large number of single access roads with poor addressing. There are also a significant number of private bridges with unknown load capacity, especially along South Butte Creek Road. Silverton Fire has been working with ODF to improve address signage in vulnerable areas, and will continue to work with the Clackamas County Fire Co-op to implement address signage in the Communities at Risk (CAR).

Burning of yard waste, agricultural and other debris is challenging in the Silverton Fire District because backyard burning is allowed in all areas. Silverton Fire District tries to be consistent with neighboring jurisdictions' backyard burning programs but does not have staff or resources to regulate burning in Silverton. The District is also home to many Christmas tree operations that have authority to burn an incredible amount of material all year long regardless of the severity of fire danger or air quality restrictions. Silverton Fire would like to work with ODF to develop a better strategy for dealing with Christmas tree waste such as a chipper cooperative. This has been identified in the Silverton CWPP Action Plan.

Community Outreach & Education

One of the Missions of the Silverton Fire District is to provide Public Education in Fire Prevention. Some of the ways that we provide this is to visit classrooms to talk with students and Station tours for school and youth groups. The Fire Silverton District also participates in activities throughout the area which include Healthy Kids Day, First Fridays, July 3rd Fireworks Display, Homer Davenport Days Festival, Food & Toy Drive and many other Community events.

Silverton Fire is also a member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, fire safety house displays, community and school programs.

Local Communities at Risk (Strategic Planning Areas)

Silverton Fire also recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local level. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #27 and listed in Table 10.13-1. Silverton Fire officials considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, single access
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. Silverton Fire District will facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically to benefit homeowners as well as adjacent public and private lands.

The Bureau of Land Management, private industrial landowners and small woodland owners have many heavily forested landholdings that are adjacent to homes in the Wildland Urban Interface. As Silverton Fire District targets the residential communities for creating defensible space, there is an opportunity to engage private, state and federal partners in reducing fuels on this adjacent public land. This has been identified as an action item.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Silverton Fire (Map # 27).

Fuels Reduction Priorities include:

Boy Scout Camp
South Butte Road
South Maple Grove Road
Groshong Road

Silverton Fire District Action Plan

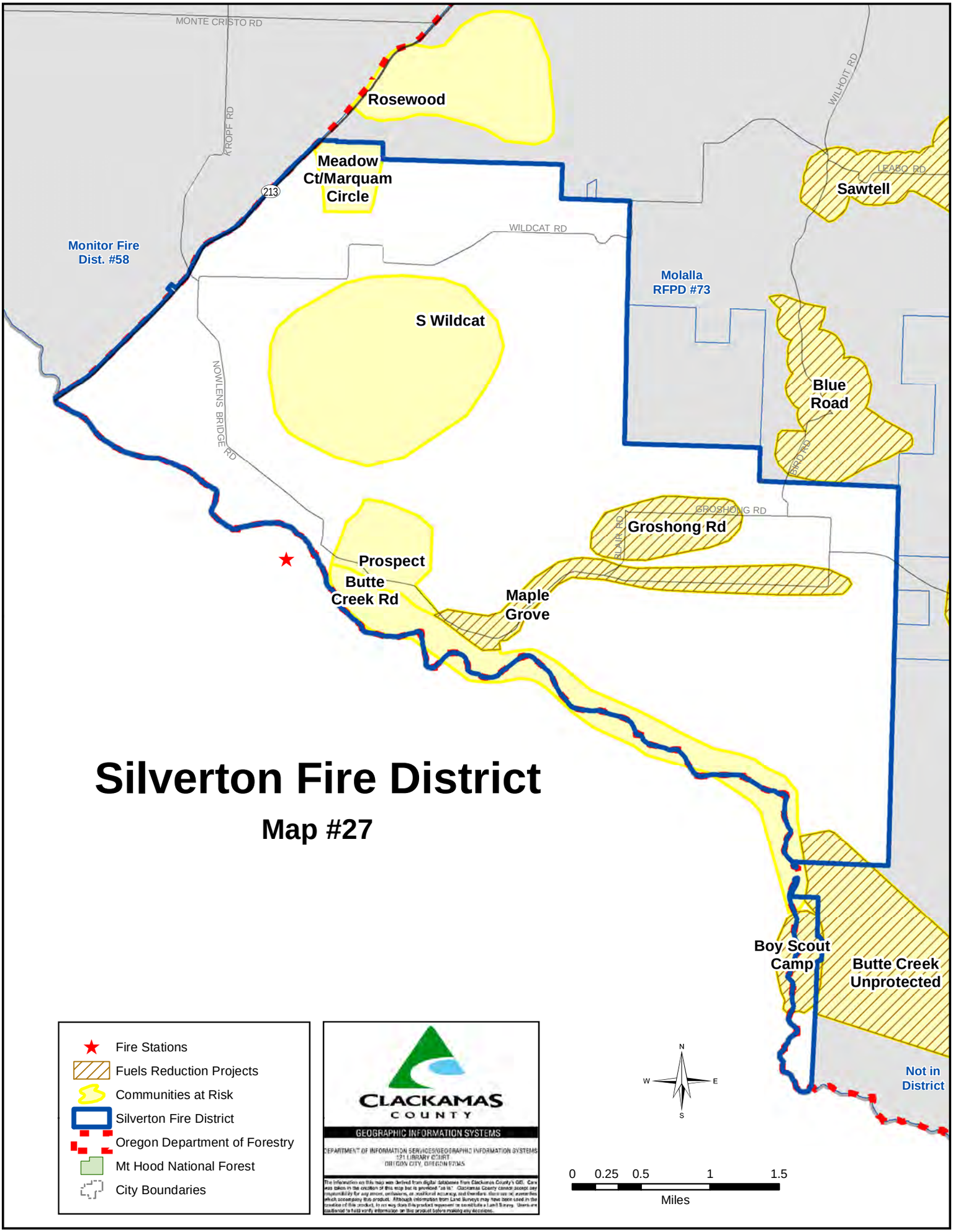
Silverton Fire District has developed a list of actions to build capacity at the Department level and has identified actions that can help to make the local CARs more resilient to potential wildfires. The action plan for Silverton Fire and the local CARs therein is provided in Table 10.13-2.

Table 10.13-1. Silverton Fire District Communities at Risk

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Silverton Fire Communities at Risk													
Boy Scout Camp	**High**	X	X	X	X	X	X		X	X	X	X	The Boy Scout Camp is an area of concern because it is heavily vegetated, has limited access and water, and is densely populated in the summer months. The canyon going into the camp reduces radio coverage. This is also an excellent location for community outreach.
South Butte Creek Road	**High**	X	X	X	X	X	X		X	X	X	X	South Butte Creek Road has many homes in heavily forested areas. Access here is impaired by private bridges, one way in and out roads that are steep and narrow, sharp curves and blind corners. There are very few address markers here, and Silverton is working with ODF to install some in 2012. Butte Creek Road is a dead end road. The canyon area presents communication issues, and is also conducive for sever fire behavior as well as landslides. Public education and outreach is needed here to work with traditionally adversarial homeowners and to reach teenagers that recreate on BLM and Private forest lands.
South Maple Grove	**High**	X	X	X	X	X	X		X	X	X	X	The Maple Grove area has very steep terrain with canyon areas, farmland, tree farms and residential properties. Access is limited with narrow driveways, private bridges, and one way in and out roads. Communications are good here and although there are a couple of ponds and swimming pools, water will still be an issue, so response would require water from monitor and Molalla. Cooper Lake is a great fill site.
South Wildcat Road	**High**	X			X	X			X	X			South Wildcat Mountain road is characterized by managed farm lands with a great deal of field burning. Brand from these large scale field burns threaten nearby forest lands. There are not many homes in this area, but those that are located here have long narrow driveways.
Marquam Circle Area	**Medium**	X	X	X					X	X		X	Marquam Circle has a high concentration of homes, with fuels consisting of tall overgrown brush blackberries and other flashy fuels. Meadow Court is one way in and out and turns into gravel. Water is the biggest issue besides defensible space.
Groshong Road	**Medium**	X	X	X					X	X		X	Groshong Road is a high priority for fuels reduction in heavily forested areas. Access is good but water is an issue.
Prospect	**Medium**	X	X	X					X	X		X	Prospect has very limited access because it has only one way in and out and is a narrow road. It would be difficult to get a type one engine into this area. There are many homes at the top of the slope where a fire could potentially run.

Table 10.13-2. Silverton Fire District Action Plan

Action Item	Timeframe	Partners	CAR
Silverton Fire Action Plan			
Inventory private bridges to determine whether or not they have had an engineer certification and encourage landowners to upgrade them to meet the 60,000 pound requirement for emergency service vehicles.	Long-Term	Clackamas County, CCEM	Silverton Fire
Build capacity and support for a more involved Burning Program including staff to educate local residents and regulate the Burning Program.	Long-Term	ODF, DEQ, Fire Co-op	Silverton Fire
Work with local Christmas Tree growers to develop and implement a chipper program to reduce excessive burning of woody material.	2 Years	ODF, CCFA	Silverton Fire
Work with Clackamas County Emergency Management and the Sherriff's Office to discuss evacuation planning especially in communities with only one way in and out.	Short-Term	CCSO, CCEM	Silverton Fire
Develop and implement a driveway program to ensure that driveways are wide enough with adequate clearance for emergency service vehicles.	Long-Term	CCSO, CCEM	Silverton Fire
Work with the Clackamas Fire Defense Board to replace outdated 800 MHz radios with newer equipment.	Short-Term	FDB	Silverton Fire
Procure 85 new generation fire shelters and other wildland PPE for staff and volunteers.	Ongoing	ODF	Silverton Fire
Work with Clackamas County Land Use Planning and Building Depts. to provide input on access and water requirements in new development.	Short Term	CCDTD	Silverton Fire
Utilize Silverton's First Friday event as a venue for public education.	Ongoing	ODF	Silverton Fire
Continue to work with ODF and other partner fire agencies to maintain wildland fire training credentials and work with local area farmers to develop opportunities to participate in live fire exercises.	Ongoing	ODF, FDB	Silverton Fire
Silverton Fire Local Communities at Risk Action Plan			
Conduct a Community Meeting to educate community on defensible space, safe burning practices, and required access for emergency response vehicles.	Ongoing	ODF	All
Develop working relationships with natural land managers including USFS and the BLM to address wildfire hazards and potential response capabilities for public lands adjacent to Communities at Risk.	Short-Term	USFS, BLM	Boy Scout Camp, S. Butte Creek Rd., S. Maple Grove Rd., S. Wildcat Rd.
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF	All
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All
Conduct Community Clean Up Days to reduce hazardous fuels. Identify opportunities to recycle or compost vegetative material instead of burning.	Ongoing	ODF, OAN	All


MONTE CRISTO RD
KROPF RD
Rosewood
Meadow Ct/Marquam Circle
213
WILDCAT RD
Monitor Fire Dist. #58
S Wildcat
NOWLENS BRIDGE RD
WILHOIT RD
LEABO RD
Sawtell
Molalla RFPD #73
Blue Road
BIRD RD
GROSHONG RD
Groshong Rd
BLAIR RD
Prospect
Butte Creek Rd
Maple Grove
Boy Scout Camp
Butte Creek Unprotected
Not in District
Silverton Fire District
Map #27
Fire Stations
Fuels Reduction Projects
Communities at Risk
Silverton Fire District
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries
CLACKAMAS COUNTY
GEOGRAPHIC INFORMATION SYSTEMS
DEPARTMENT OF INFORMATION SERVICES/GEOGRAPHIC INFORMATION SYSTEMS
121 LIBRARY COURT
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10.14. Community at Risk: Tualatin Valley Fire and Rescue

Tualatin Valley Fire and Rescue (TVF&R) has been identified as a Community at Risk (CAR) by the Oregon Department of Forestry. The District has participated in the Clackamas County CWPP planning process to evaluate capabilities to prevent, prepare for and respond to potential wildfire events.

Tualatin Valley Fire and Rescue Description

Tualatin Valley Fire & Rescue provides fire protection and emergency medical services to approximately 440,000 citizens in one of the fastest growing regions in Oregon. The 210 square mile service area includes nine cities and unincorporated portions of Clackamas, Multnomah, and Washington County. The cities covered by TVF&R in Clackamas County include West Linn and Wilsonville. TVF&R employs a full paid staff of 325 employees and 62 volunteers.

Wildland Urban Interface (WUI)

The Wildland Urban Interface areas in the Clackamas County portion of TVF&R's District are characterized by suburban communities and rural residential homes surrounded by heavy fuels and steep slopes. In addition, many of the neighborhoods here have only one way in and one way out with narrow, steep driveways and poor water supply.

Heavy and continuous fuels dominate many of the parks and natural areas surrounding the communities here, so fires that begin on public land or on smaller private residential lots can quickly threaten the communities and natural resources that thrive in the cities of West Linn and Wilsonville. In addition, response times from rural fire stations could be delayed, which underscores the need for community preparedness in the wildland urban interface.

TVF&R Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted TVF&R in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in TVF&R and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

TVF&R promotes the creation of defensible space, use of fire-resistant roofing and building materials, and community preparedness in the WUI. TVF&R works well with Clackamas County and the cities of Wilsonville and West Linn to integrate these concepts at the regulatory level by providing input on access and water supply during land use reviews for new residential development.

Emergency Response

A major wildland urban interface fire in West Linn or Wilsonville may exceed the immediate resources and capabilities of TVF&R. For this reason, TVF&R has mutual aid agreements in place to allow for the sharing of resources across the county in the event of a large scale disaster including wildfires.

In the event of a large widlland fire, evacuations may be necessary. This rural residential area presents some challenges for evacuations due to access constraints including long, narrow and steep driveways. Many of the identified communities at risk have only one point of egress, making it difficult to manage incoming and outgoing traffic during an emergency.

TVF&R follows DEQ burning policies for backyard burning. The majority of West Linn is within the DEQ burn ban area, which does not allow backyard burning at any time of the year. Wilsonville residents are permitted only during designated burn seasons and on DEQ approved burn days.

TVF&R employs 325 career and 62 volunteer firefighters who receive regular wildland fire training to remain current on qualifications. Although the District is able to support classroom training, lack of live- fire experience makes it difficult to maintain wildland qualifications. New staff members have little to no live-fire experience and many Battalion Chiefs assigned to task forces have difficulty completing task books without being deployed. TVF&R has been working with Metro, Tualatin Hills Park and Recreation District and Clean Water Services to identify opportunities for prescribed burns in Washington County that would benefit native ecosystems while providing live-fire experience to TVF&R staff (e.g. Cooper Mountain and Gardner Prairie). TVF&R would like to expand this partnership to the Clackamas County area by building relationships with Metro, Wilsonville, West Linn and County Parks staff.

Community Outreach & Education

TVF&R is dedicated to fire prevention, public safety and community wellness and uses a variety of forums to promote residential fire safety, defensible space, and safe burning practices. The community is very supportive of the TVF&R and participates in activities throughout the year, some of which include smoke detector, fire prevention, car seat, and community safety programs. TVF&R is also an active member of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs such as team teaching in the grade school fire safety programs, safety fairs with car seat inspections, community and school programs, and fire safety house displays. TVF&R has a "Wildfire Can Happen Here" program that promotes wildfire awareness in high hazard areas. To date, the majority of the areas targeted for this program have been in Washington and Multnomah Counties. TVF&R would like to expand this effort to the Clackamas CAR's.

Local Communities at Risk (Strategic Planning Areas)

TVF&R recognizes that there are smaller-scale Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #28 and listed in Table 10.14-1. TVF&R professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

Fuels reduction projects can and should be accomplished at the local scale, which is the creation of defensible space around homes, as well as the landscape scale to extend vegetation treatments onto adjacent forested land and natural areas. TVF&R will help top facilitate cooperation between public and private organizations to ensure that fuels reduction work occurs strategically and benefits homeowners as well as adjacent public and private lands.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by TVF&R (Map #28).

The following areas have been identified as potential fuels reduction projects by TVF&R, the cities of West Linn and Wilsonville, Clackamas County and Metro:

- Willamette Narrows Phase I
- Willamette Narrows Phase II
- Burnside Park/Maddox Woods
- Hidden Springs
- 1-205 Corridor
- Open Space @ Buck/Barlow
- Wildwood Open Space
- Interstate Tractor Open Space
- Mary S. Young Park
- Robinwood park
- The White Oak Savannah
- Troon Open Space
- GONP Burn
- Boeckman Creek

TVF&R Wildfire Action Plan

TVF&R has developed a list of actions to build capacity at the District scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for TVF&R and the local CARs therein is provided in Table 10.14-2.

Table 10.14-1. Tualatin Valley Fire and Rescue Local Communities at Risk

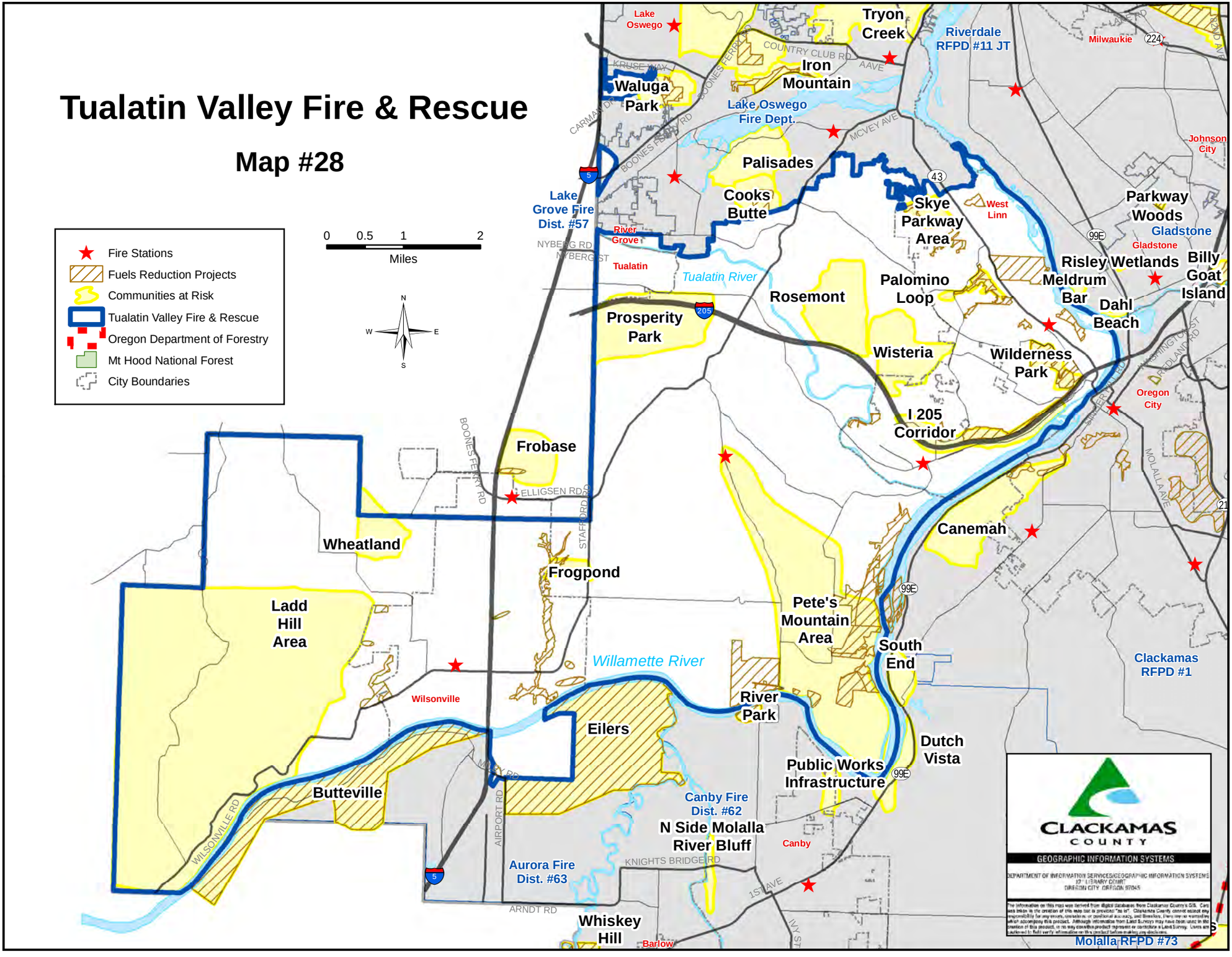
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
TVF&R Communities at Risk													
205 Corridor (3 steep south facing slopes)	High	X	X	X			X		X	X		X	This area has the highest occurrence of wildfire ignitions because the hillside is covered with light flashy fuels and is adjacent to Hwy 205. It is a south facing slope with the potential of rapid fire spread toward homes at the tope of the slope. This area should be considered fire fuels reduction.
Ladd Hill	High	X	X	X	X	X			X	X		X	This area has south facing slopes, limited access and long response times. Access is also poor to many of the homes in this community, there is no water available, it is heavily forested poor defensible space and poor addressing. There is a mixture of public and private forest land. Coral Creek is a wetland area.
Wilderness Park/Camassia Park	High	X	X	X	X		X	X	X	X		X	This community as a stand pipe system but limited access. The area of concern is a NE facing slope. There is usually at least one fire ignition a year in late May, early June. This area has a high potential for an interface fire because homes are on top of a heavily vegetated, steep slope . High school kids like to recreate here and the park has an elaborate trail system that brings many visitors. This foot traffic increases the potential of ignition sources.
Skye Park Way	High	X	X	X					X	X		X	This area is steep with heavy vegetation but has a north facing slope. Access is limited due to slopes.
Frog Pond Lane	Med	X	X	X	X				X	X		X	This community is in the northeast area of the Boeckman Creek drainage area. There are ladder fuels, invasive species and heavy fuels. This area should be considered for fuels reduction.
Petes Mountain Area	Medium	X	X	X	X		X		X	X		X	This community is particularly vulnerable because it has a south-facing aspect . Metro owns some land here and has been working withTVF&R to implement a fuels reduction and habitat improvement project. The terrain is very steep along the river, so access is an issue . It is very densely vegetated with scrub oak and oak trees, 6 ft tall grasses and blackberries. The north facing slope is steep with access challenges.
Palomino Loop Trail	Medium	X	X	X					X	X		X	The Hidden Springs Community is characterized by steep slopes, heavy vegetation, and limited access and water supply. It has a north-facing aspect. Homes here are in need of defensible space.
Rosemont Area	Medium	X	X	X				X	X	X		X	Rosemont has many steep slopes with a southern aspect. Access and water are limited here. Homes are in need of defensible space. Protection capabilities are somewhat diminished because it is in a more rural area, so homeowners need to be more prepared.
Wysteria	Medium	X	X	X				X	X	X		X	This community has a south-facing steep slope, it is heavily forested, and has residential homes on 3 sides that would benefit from defensible space.
Frobase Road	Medium	X	X	X				X	X	X		X	Frobase Road is one way in and out, is fairly steep, and has heavy vegetation adjacent o homes. Communications are good here, but there is little water.
Prosperity Park/Borland Rd.	Medium	X	X	X	X		X	X	X	X		X	Prosperity park has very poor access and water supply. It is heavily forested, and homes in need of defensible space. The area between Hwy 205 and Borland Road has a south-facing slope with a mix of light flashy fuels and heavy vegetation. There is a neighborhood to the northwest and church to the east. Hwy 205 provides potential ignition
Wheatland Road Area	Medium - Low	X	X	X		X			X	X		X	This is a large rural area with many residents, heavily forested with no hydrants.

Table 10.14-2. Tualatin Valley Fire and Rescue Action Plan

Action Item	Timeframe	Partners	CAR
TVF&R Action Plan			
Identify and pursue opportunities to participate in prescribed burns and live fire tranining to update and maintain wildfire certifications.	Ongoing	Metro, City of Wilsonville, City of West Linn, Clean Water Services, ODF	TVF&R
Continue to foster partnerships with natural resrouces managers to assess and implement potential fuels reduction projects in natural areas adjacent to Communities at Risk.	Ongoing	Metro, City of Wilsonville, City of West Linn, Clean Water Services, ODF	TVF&R
Partner with the Clackamas County Fire Defense Board to particpate in a WUI conflagration exercise.	2 Years	Clackamas Fire Defense Board	TVF&R
TVF&R Local Communities at Risk Action Plan			
Utilize TVF&R's "Wildfire Can Happen Here" public outreach campaign in the high-priorty CARS identified in Clackamas County.	Ongoing	Fire Co-op	205 Corridor, Ladd Hill, Camissa Park
Incorporate Wildfire awarenss and risk reduction strategies into TVF&R's Community Safety & Wellness Program.	Ongoing	HOA's	All CAR's
Improve address signage for emergency response.	Ongoing	Fire Co-op	All CAR's
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All CAR's
Promote legal, safe and responsible debris burning through public outreach and education.	Ongoing	ODF, DEQ, Fire Co-op	All CAR's
Encourage communities to develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All CAR's

Tualatin Valley Fire & Rescue

Map #28



10.15. Community at Risk: Wildland Agencies and Unprotected Areas

The communities in Clackamas County that are not covered by a structural fire agency are considered Communities at Risk (CAR) by Oregon Department of Forestry. The majority of these areas are within wildland agency protection boundaries (ODF and USFS). The widland agencies provide fire suppression for forest land only and do not provide structural fire protection. The ODF and USFS have participated in the Clackamas County CWPP planning process to identify opportunities to prevent, prepare for and respond to potential wildfire events in unprotected areas.

Unprotected Areas Description

In 2004, the Governor's Fire Service Policy Council convened a task force to discuss the issue of areas that are vulnerable to wildfire but are without publicly-funded structural fire protection. This is a major issue throughout the state because the number of unprotected homes in the Wildland Urban Interface (WUI) continues to grow. State firefighting actions on these lands are made possible only after the Governor invokes the Conflagration Act. The task force agreed that protection should be provided only if the county is 1) completing a community wildfire protection plan; 2) has adopted the Department of Land Conservation and Development's Goal 4 requiring fire defense standards for new construction in forest zones; and 3) is changing property tax statement language for ODF assessment from "fire protection" to ODF "non-structural fire suppression" so homeowners and insurers are not lead to believe they have structural fire protection. This section of the Clackamas County CWPP addresses the unprotected areas, thereby meeting the provisions set forth by the task force.

There are approximately 722,799 acres of structurally unprotected lands in Clackamas County. The majority of this acreage is Mount Hood National Forest land, private industrial forest land, or undeveloped land. Some small pockets of land do contain a few residences, buildings and infrastructure that would require protection. These are the areas addressed here.

Wildland Urban Interface (WUI)

The majority of communities, buildings and infrastructure in structurally unprotected areas are very rural examples of the Wildland Urban Interface. They are characterized by residential homes surrounded by heavy fuels and steep slopes, very limited access and potential communication issues. These factors, combined with the lack of structural fire protection make unprotected communities extremely vulnerable.

Wildland Agency and Unprotected Areat Wildfire Hazards

The Clackamas County CWPP wildfire hazard assessment assisted the ODF and USFS in identifying areas that may be at higher risk to potential wildfires. Map #10 illustrates the overall wildfire hazard risk in the unprotected areas and will be used to help target areas for wildfire prevention activities.

Structural Ignitability

The Clackamas County Department of Transportation (DTD) notifies local deputy fire marshals of new lots of record to receive input on access and water requirements. In areas that are not in a structural fire agency's boundary, these requirements may not be adequately incorporated into new development. In an effort to reduce structural ignitability, DTD now requires that any new construction must either annex into a structural fire agency's boundary or contract for structural protection. Lots zoned for Agriculture/ Forestland are required to have fuel breaks, emergency access and turn-arounds and adequate water supply.

Emergency Response

A major wildland urban interface fire in the unprotected areas of Clackamas County would likely require a multi-agency response. The Oregon Dept. of Forestry and the USFS are the wildland protection agencies, while local structural fire districts protect homes. The USFS and ODF have a mutual aid agreement that allows for the sharing of resources, The Clackamas Fire Defense Board also has a Fire Mutual Aid Agreement that is the vehicle through which resources can be shared across jurisdictional boundaries throughout the County. The USFS is not a signatory on this agreement, so any assistance from structural fire agencies would have to come through the ODF agreement. The USFS has identified the need to be a signatory on the Clackamas Fire Defense Boar Mutual Aid Agreement in the USFS CWPP Action Plan.

Burning of yard waste and debris a major issue in unprotected communities because backyard burning is usually regulated by structural fire agencies. The majority of communities that are unprotected are outside of the DEQ boundary, and will burn all year long. ODF only issues burn permits for slash burning or other operations associated with timber harvesting, so backyard burning in unprotected areas is largely unregulated.

The majority of acreage outside of structural fire protection boundaries is in the eastern portion of the county, where VHF is more effective than 800 MHz. Radio communications in unprotected areas can be challenging because 800 MHz is the primary system for structural fire agencies. ODF, the USFS and the majority of rural structural fire agencies use VHF, so interoperability for a larger scale mutual aid event may become an issue. ODF has a few portable 800 MHz radios, but the USFS does not. In addition, the USFS does not routinely communicate with structural fire agencies, so there may be confusion regarding communication protocol during a large scale event. The USFS has identified the need to coordinate radio communications with structural fire agencies in the USFS CWPP Action Plan.

Water supply is usually an issue in rural, unprotected areas. ODF and USFS are accustomed to drafting from existing water bodies and sources to supplement water that is brought on scene, and having water sources identified and developed in rural unprotected areas can be critical to response tactics. This has been identified as a need in the County CWPP action plan.

The ODF and USFS utilize permanent and seasonal staff to respond to wildfires. Wildfire training and refreshers are provided annually to remain current on qualifications. Although the wildland agencies are able to provide classroom training, the lack of live fire experience makes it difficult to retain some wildland qualifications. ODF and USFS is working with the Clackamas Fire Defense Board to identify opportunities to provide live fire training and prescribed burns to address the fire component of wildland task books.

Community Outreach & Education

ODF and USFS are committed to fire prevention, and use a variety of forums to promote residential fire safety, defensible space, and safe burning practices. Outreach activities include school programs, public presentations, media events and safety fairs. The USFS and ODF use fire severity rating signs placed in strategic areas to inform the public about wildfire danger. These wildland agencies are active members of the Clackamas County Fire Prevention Cooperative which is a consortium of structural and wildland fire protection professionals that work together to deliver programs.

Local Communities at Risk (CAR's)

ODF and USFS have identified Communities at Risk that have unique wildfire hazards to be addressed at the more local scale. These areas were referred to as Strategic Planning Areas in the 2005 iteration of the CWPP, but will now be referenced as local Communities at Risk to be consistent with state and federal language. Communities that have been identified as being particularly vulnerable to wildfires are illustrated in Map #29 and listed in Table 10.15-1. Wildland Fire professionals considered the following factors to determine the local CARs including:

- Need for defensible space
- Access limitations (narrow driveways, lack of address signage, one way in/one way out)
- Steep slopes that can hinder access and accelerate the spread of wildfire
- Lack of water available for wildland fire fighting
- Heavy fuels on adjacent public lands
- Potential ignition sources from recreationists and transients
- Agricultural and backyard burning
- Lack of community outreach programs to promote wildfire awareness
- Communications difficulties

Fuels Reduction

The Oregon Dept. of Forestry has been successful in receiving numerous grants to encourage homeowners and small woodland owners to reduce hazardous fuels through a cost share program. Fuels Reduction projects on federal land require an in-depth National Environmental Protection Act analysis that can be costly and time consuming, so completing fuels reduction projects in a timely manner can be challenging. However, the USFS has identified priorities for fuels reduction on federal lands adjacent to communities at risk.

To ensure that landscape-level treatments are paired with projects to create defensible space around vulnerable communities, priority fuels reduction projects have been overlaid with the Communities at Risk Identified by Widland Agency and Unprotected Areas (Map #29).

Fuels Reduction Priorities include:

Sandy Watershed
NF Bedford
USFS Summer Homes
Kiwanas Camp
Trillium Lake
Wapinitia
Sisi Butte Lookout and Electronic Site
Powerlines near Govt. Camp
Timberlake CCC Job Corps
Ripplebrook Guard Station
Joe Graham Guard Station
3 Lynx
Zig Zag Guard Station

Wildland Agency and Unprotected Area Action Plan

The ODF and USFS have developed a list of actions to build capacity at the District scale and has identified actions that can help to make the local CARS more resilient to potential wildfires. The action plan for Canby Fire and the local CARs therein is provided in Table 10.15-2.

Table 10.15-1 Structurally Unprotected Communities at Risk

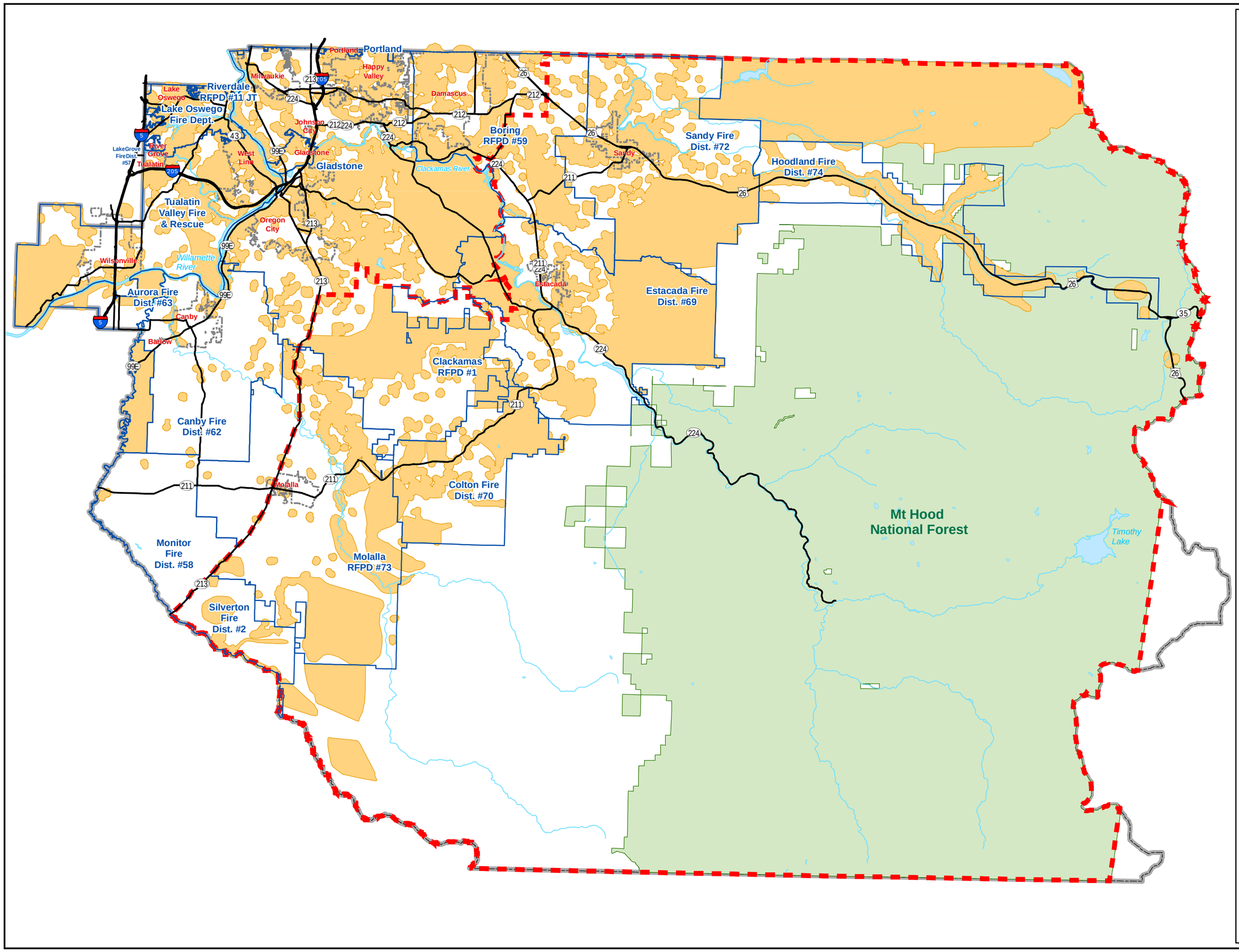
Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Clackamas County Unprotected Communities at Risk (USFS CARs that are in both districts, but protected by USFS)													
Ripplebrook Guard Station	**High**	X			X		X	X	X	X	X	X	The USFS Ripplebrook Guard Station houses many Job Corps instructors. There are at least 20 structures behind the station, and 4 buildings associated with the station. There is a helibase with structures to be protected as well. Farther upslope, there are 2 bunk houses with 6 units. Access is generally good, and there is an improved gravel road to hellibase and bunk house tied to water system from job corps and hydrants, radio comms is good there is no cell service.
Timberlake Job Corps	**Medium**	X			X		X	X	X	X	X	X	The Timberlake Job Corps is a United States Department of Labor program that provides housing and curriculum to students from 18-25. It is located on USFS land and uses USFS buildings. The big problem here is protection capability. The Job Corps is about 30 minutes from Estacada Fire, which is the closest structural protection district. Currently, there is no contract in place to provide structural protection and the Job Corps is considering a Fire Brigade that would help with initial attack until Estacada arrives. They do have a hydrant system. Radio communications are adequate because the Whalehead repeater is nearby, but there is no cell service here. Burning is accomplished through burn permits and they is generally not an issue. Shaded fuel breaks leading into job corps boundary are needed. There is great opportunity for youth engagement, potentially integrating structural fire protection into curriculum (although turn over is problematic).
3 Lynx	**Medium**	X		X	X		X	X	X	X	X	X	The 3 Lynx community was established as hydropower was being developed on the Clackamas River. It used to be a thriving community, but there are many empty structures now, This community of about 15 homes contracts with Estacada fire for structural fire protection. There is adequate water here, but communications may be compromised and response times will be greater than 10 minutes.
Joe Graham /Clackamas Lake Guard Station	**Medium**	X			X		X	X		X	X	X	The Joe Graham/Clackamas Lake Guard Station was once a ranger district, so there are many historic structures here. It has water system and there is a huge lake nearby. There was a fire here in 02-03, The visitor's center is typically occupied on a rotating basis.

Community At Risk	CAR Priority	Defensible Space	Access	Water	Public Forest Lands	Private Forest Lands	Recreators/ Transients	Protection Capabilities	Burning	Preparedness	Communications	Steep Slopes	Description
Clackamas County Unprotected Communities at Risk (CARs that are in the ODF protection boundary only)													
Elk Prairie	**High**	X	X	X	X	X		X	X	X		X	Elk Prairie is a community of many residential homes that are surrounded by private forest land. Access here is poor and there is no hydranted system in the area. There are [ponds that may be used for fire suppression.
Upper Sawtell Unprotected	**High**	X		X	X	X		X	X	X		X	This community includes everything above Maple Grove and North of Elk Prairie. The area has very poor access and a great deal of debris burning. It is surrounded by BLM and private forest land, and has steep slopes. ODF has done some canvassing in this area and would like to partner with local fire agencies to inform the landowners of their unprotected status.
East Highland	**High**	X		X	X	X	X	X	X	X	X	X	East Highland Road has about 7 homes surrounded by 3 fire districts, but is unprotected. Water and access are major issues here. This community includes the BLM seed orchard.
Wapinitia	**Medium**	X	X	X	X	X	X	X	X	X	X	X	The Wapinitia community is highly vulnerable,. It is a few miles east of the Hoodland Fire District on Hwy 26. ODF and USFS have made attempts to work with the community in the past but it has been difficult to achieve and sustain progress because many homeowners are not engaged. There is a stand pipe and a pump house but it doesn't have much volume. There was a house fire recently, and the home owners used the standpipe and local hose to help with fire. The HOA Board is not supportive of defensible space, but some individual owners have done some work on their own. There is little support for fuels reduction on common areas. The community is surrounded b y USFS land. The USFS attempted to create a 300 foot defensible space buffer, but the community was not supportive. Access is extremely limited, and radio and cell communications are limited.
Lower Highland	**Medium**	X		X		X		X	X	X		X	Lower Highland Road is a good example of the Wildland Urban Interface as it has heavy fuels adjacent to unprotected homes. The homes are surrounded by managed forest land which could serve as an ignition source. Access and communications are good. There are no hydrants, but there are ponds nearby.
Ramsbey Unprotected	**Medium**	X		X		X		X	X	X		X	The unprotected portion of Ramsbey Road has a history of arson fires. There are managed private forest lands surrounding the area which also can serve as an ignition and fuel source. Communications and protection capabilities are the most challenging aspects for this community.
Lais Road	**Medium**	X	X	X		X		X	X	X		X	Lais Road has serious access constraints as it is one way in and out and many homes have steep and narrow driveways with poor turnarounds. There are a series of cabins along the river that are access through Weyerhaeuser industrial forest land. Although it is close to the river, water will be an issue here because it is difficult to access the river.
Butte Creek Unprotected	**Medium**	X	X	X	X	X		X	X	X	X	X	The unprotected portion of Butte Creek Road is highly vulnerable because there is no water, access limited to one way in and out, and there is managed BLM and private forest land. Communication is limited here and Butte Creek is one way in and out all the way into Scotts Mills.

Table 10.15-2 Wildland Agency (ODF & USFS) Action Plans

Action Item	Timeframe	Partners	CAR
ODF CWPP Action Plan			
Work with the County Tax Assessor to change the language on property tax statements for ODF assessment from "fire protection" to ODF "non-structural fire suppression" so homeowners and insurers are not led to believe they have structural fire protection.	1 year	ODF, County Tax Assessor	ODF-Unprotected Areas
Clarify roles and responsibilities for fire suppression and prescribed burns on State Park lands and Metro-owned properties.	2 Years	State Parks, Metro	ODF
Continue to seek funding to support the fuels reduction cost share assistance program.	Ongoing	WSFM, SFA	ODF
Continue to seek funding to support the seasonal Fuels/Fire Crew	Ongoing	Clackamas County, WSFM, SFA	ODF
Work with local fire agencies and natural resources managers to identify opportunities for live fire exercises.	Ongoing	Metro, City Parks Depts., FDB	ODF
USFS CWPP Action Plan			
Work with the Clackamas Fire Operations Group to enhance capabilities for interoperability. Consider having a cache of at least five 800 MHz portable radios available for USFS use. Work with mutual aid partners to determine best communications strategies (consistent frequency, VHF and 800 MHz).	2 Years	CFOG, Fire Districts	USFS
Work with the Clackamas Fire Defense Board to become a signatory on the County's Mutual Aid Fire Agreement.	1 Year	FDB	USFS
Clarify relationships, roles and financial responsibility for responding to fires in unprotected areas (currently there is no mechanism for reimbursement in unprotected areas).	Long Term	FDB	USFS
Conduct and operations meeting with adjacent RFPD's to discuss how we will operational response tactics.	2 Years	Local Fire Districts	USFS
Work with AMR to develop an understanding of resources available for emergencies and protocol for response.	1 Year	AMR	USFS
Work with CCOM, BOEC and Sandy Fire to include USFS as a resource on run cards associated with events in the Bull Run Watershed.	1 year	CCOM, BOEC, Sandy Fire	USFS

Table 10.15-3 Unprotected Area Action Plans			
Unprotected Areas Action Plan (ODF and USFS)			
Inform homeowners in unprotected areas of their unprotected status (using mailings) and provide them with information about options for enhancing structural protection	2 Years	Fire Co-op, USFS	All Unprotected Areas
Encourage communities in unprotected areas to develop local community wildfire protection plans & become Firewise/USA Communities.	Ongoing	Clackamas County,ODF, USFS	All Unprotected Areas
Research opportunity to provide disclosure of unprotected status on lots through deed restrictions. County currently requires all new homes to be in a fire District or contract for services.	2 Years	Clackamas County	All Unprotected Areas
Partner with the Fire Co-op to create and distribute outreach materials that promote responsible burning, defensible space and reduction of structural ignitability within the Home Ignition Zone.	Ongoing	Fire Co-op	All Unprotected Areas
Promote legal, safe and responsible debris burning through public outreach and education.	2 Years	ODF, DEQ, Fire Co-op	All Unprotected Areas
Reduce hazardous fuels in the ROW of potential evacuation routes. Engage residents adjacent to primary evacuations routes to extend treatments onto private land.	Ongoing	ODOT, Clackamas County Roads	All Unprotected Areas
Continue to collect structural ignitability data by conducting structural triage assessment data collection (including GPS points) for homes in Communities at Risk.	Ongoing	ODF	All Unprotected Areas
Develop a community-driven pre-disaster plan including evacuation routes, telephone call down trees, and other strategies for strengthening community response.	Ongoing	Clackamas County Emergency Management	All Unprotected Areas
Implement road addressing (including length of driveways) and other signage for emergency response.	Ongoing	ODF	All Unprotected Areas
Seek grant funding to support fuels reduction and creation of defensible space around homes.	Ongoing	ODF	All Unprotected Areas
Work with private forest landowners to reduce fuels adjacent to CAR's.	Ongoing	CCFA	All Unprotected Areas
Work with BLM and USFS to reduce hazardous fuels adjacent to CAR's.	Ongoing	BLM, USFS	All Unprotected Areas



Wildland Urban Interface (WUI) 2012

WUI
Fire Districts
Oregon Department of Forestry
Mt Hood National Forest
City Boundaries

WUI areas contain 4 structures per 40 acres and are within Fuel Type III (tall flammable grass, heavy flammable brush, or heavy timber). Each area meeting these criteria had to be larger than 5 acres to be included. The resulting areas were buffered to 660' and some areas were expanded to include entire locally-defined Communities at Risk (CARs).

Map #4

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0 1 2 4 6 8 Miles

CLACKAMAS COUNTY

GEOGRAPHIC INFORMATION SYSTEMS

DEPARTMENT OF INFORMATION SERVICES/GEOGRAPHIC INFORMATION SYSTEMS
121 LIBRARY COURT
OREGON CITY, OREGON 97045

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