

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 an 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*.

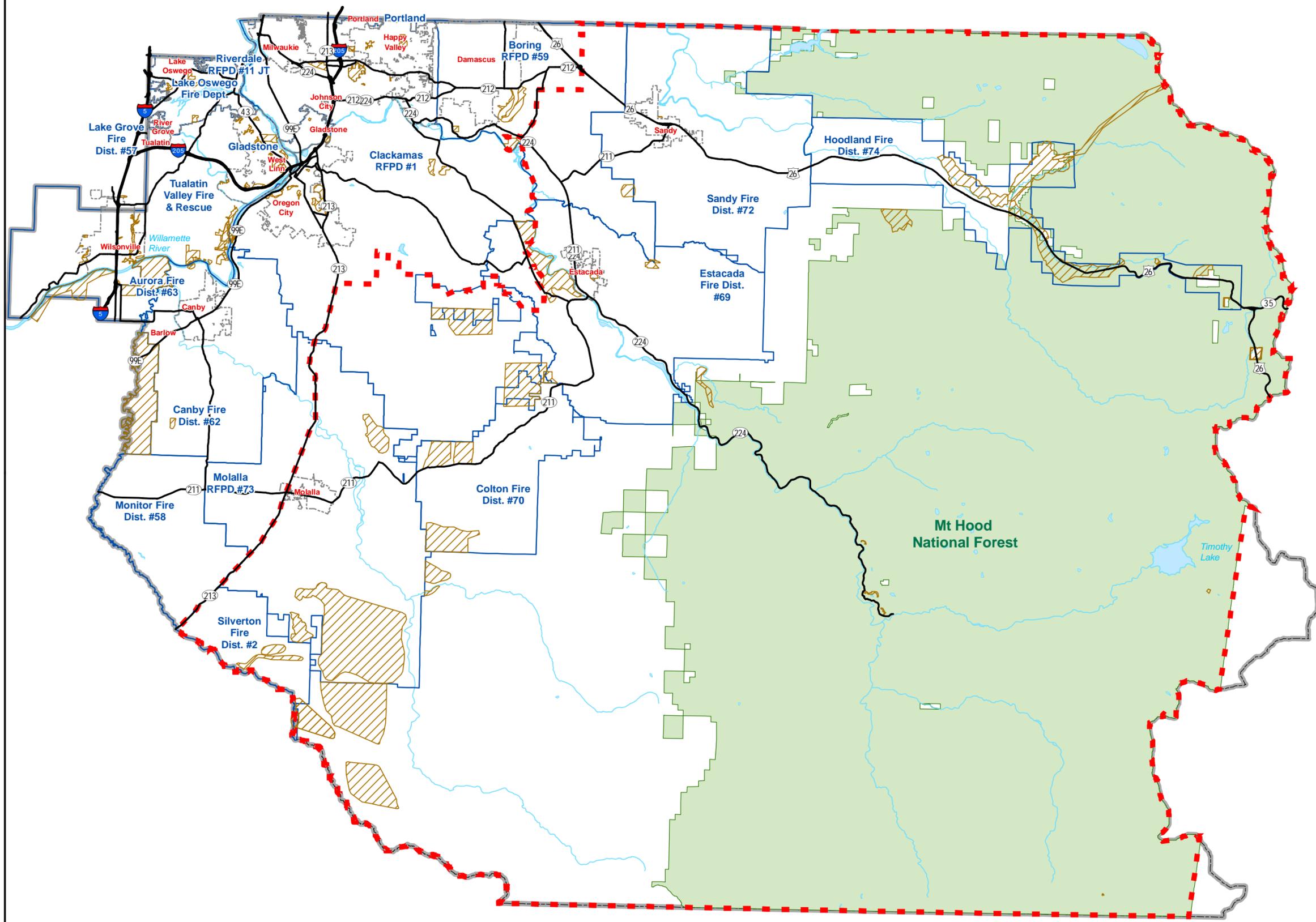
Table 5-1. Proposed Fuels Reduction Projects (2012)

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				
RIFFLEBROOK	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

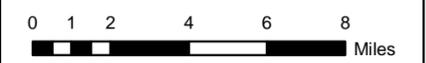
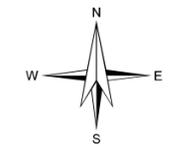
Fuels Reduction Projects 2012



-  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



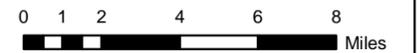
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CCWPP Communities at Risk and Fuels Reduction Projects 2012

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

Map #13



GEOGRAPHIC INFORMATION SYSTEMS

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