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# The Dalles Watershed Phase II Hazardous Fuels Reduction

## Preliminary Assessment

### Barlow Ranger District Mt. Hood National Forest

Wasco County, Oregon

Legal Description: T1S; R10E (Hood River County) & R11E (Wasco  
County); Willamette Meridian

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## Table of Contents

Table of Contents .....	i
List of Tables and Figures .....	iii
Summary .....	vii
<b>CHAPTER 1 – Introduction .....</b>	<b>1-1</b>
1.1 Document Structure .....	1-2
1.2 Background .....	1-2
1.3 Purpose and Need for Action .....	1-5
1.3.1 Management Direction .....	1-5
1.3.2 Desired Future Condition / Land Allocations .....	1-7
1.4 Proposed Action .....	1-13
1.5 Decision Framework .....	1-15
1.6 Public Involvement .....	1-15
1.6.1 Collaboration .....	1-15
1.6.2 Scoping/Publication Involvement .....	1-16
1.7 Issues .....	1-16
<b>CHAPTER 2 – Alternatives, including the Proposed Action .....</b>	<b>2-1</b>
2.1 Alternative Formulation .....	2-1
2.2 Alternatives Considered in Detail .....	2-2
2.2.1 No Action Alternative .....	2-2
2.2.2 Proposed Action .....	2-2
Variable Density Thinning .....	2-4
Specific Treatments by Unit and Logging Systems .....	2-5
Riparian Thinning Prescriptions .....	2-11
Economics .....	2-13
Other Fuel Reduction Activities .....	2-13
Road Reconstruction/Maintenance .....	2-15
2.2.3 Design Criteria/Mitigation Measures for All Alternatives .....	2-17
2.2.4 Monitoring Requirements .....	2-24
2.3 Alternatives Considered, but Eliminated from Detailed Study .....	2-25
2.4 Mt. Hood Land and Resource Management Consistency .....	2-27
2.5 Regulatory Framework .....	2-29
2.5.1 Best Management Practices .....	2-29
2.5.2 Consistency with the Healthy Forest Restoration Act .....	2-29
<b>CHAPTER 3 –Environmental Consequences .....</b>	<b>3-1</b>
3.1 Fire and Fuels Management .....	3-2
3.2 Air Quality and Smoke Management .....	3-16
3.3 Vegetation Resources .....	3-24
3.4 Soil Productivity .....	3-49
3.5 Watershed Resources .....	3-57
3.6 Aquatic Species and Associated Habitat .....	3-78
3.7 Wildlife Resources .....	3-94
3.8 Botany .....	3-119

3.9 Invasive Plant Species.....	3-122
3.10 Aquatic Conservation Strategy Objectives .....	3-128
3.11 Recreation and Visual Quality .....	3-132
3.12 Heritage Resources .....	3-139
3.13 Transportation System .....	3-142
3.14 Climate Change.....	3-144
3.15 Environmental Justice and Civil Rights.....	3-146
3.16 Other Required Disclosures .....	3-147
<b>CHAPTER 4 – Consultation and Coordination.....</b>	<b>4-1</b>
REFERENCES .....	Ref-1
GLOSSARY .....	Glossary-1
<b>APPENDICES</b>	
Appendix 1 – Collaborative Group Recommendations to US Forest Service	
Appendix 2 – Response to Comments	

## List of Tables

<b>Table 1-1</b>	Proposed Action Treatment Acres
<b>Table 2-1</b>	Proposed Action Treatment Acres
<b>Table 2-2</b>	Unit Information
<b>Table 2-3</b>	Proposed Road Reconstruction/Maintenance Work on National Forest System and City of The Dalles Roads
<b>Table 3.0-1</b>	List of Projects Considered in Cumulative Effects Analysis
<b>Table 3.1-1</b>	Fire Regimes of Oregon and Washington (Rice et al. 2006)
<b>Table 3.1-2</b>	Fire Regime Condition Class Descriptions (Rice et al. 2006)
<b>Table 3.1-3</b>	Vegetation STAND Groups and Assigned Reference Fuelbed
<b>Table 3.1-4</b>	Natural Fire Regimes
<b>Table 3.1-5</b>	Fire Regime Condition Class Map for The Dalles Municipal Watershed
<b>Table 3.1-6</b>	Existing (pre-treatment) Fire Potential and Fire Behavior
<b>Table 3.1-7</b>	Comparison of Existing Condition and Proposed Action Fire Behavior
<b>Table 3.1-8</b>	Comparison of Existing Condition and Proposed Action Fire Potentials
<b>Table 3.2-1</b>	2010 NAAQS for PM10 and PM2.5
<b>Table 3.2-2</b>	Sensitive Airsheds
<b>Table 3.2-3</b>	Air Quality Index Health Category Descriptors
<b>Table 3.3-1</b>	Acres and Percent of the Stand Size Class for the Project Area
<b>Table 3.3-2</b>	Existing Site and Vegetative Condition for The Dalles Watershed Phase II Project Area
<b>Table 3.3-3</b>	Existing Site and Vegetative Condition of Proposed Treatment Stands within The Dalles Watershed Phase II Project Area
<b>Table 3.3-4</b>	Existing Site and Vegetative Condition of Proposed Treatment Stands within The Dalles Watershed Phase II Project Area
<b>Table 3.3-5</b>	Acres by Harvest Type in The Dalles Watershed Phase II Project Area
<b>Table 3.3-6</b>	Resulting density levels from FVS modeling of the no action alternative

<b>Table 3.3-7</b>	Resulting density levels from FVS modeling of the proposed action
<b>Table 3.3-8</b>	Differences between the action and no action alternatives from FVS modeling
<b>Table 3.4-1</b>	Summary of Forest Plan Soil Standards Guiding the Soils Analysis
<b>Table 3.4-2</b>	Soil Types on the Mt Hood National Forest within the Planning Area and Useful Ecological Characteristics
<b>Table 3.4-3</b>	Summary of Soil Types in the Analysis Area and Associated Management Interpretations from The Dalles Watershed Soil Survey
<b>Table 3.4-4</b>	Summary of Stands Monitored with Shovel Probe Transects
<b>Table 3.5-1</b>	Strengths and Weaknesses of the Water Quality Analysis Approach
<b>Table 3.5-2</b>	Highest 7-Day Average Maximum Stream Temperatures in the Analysis Area
<b>Table 3.5-3</b>	Sub-watershed Road Density
<b>Table 3.5-4</b>	Shading on Streams in the Analysis Area
<b>Table 3.5-5</b>	Width of Primary Shade Zone
<b>Table 3.5-6</b>	WEPP Model Run Showing the Difference in Erosion and Sedimentation between a Gravel Surface Road and a Native Surface Road
<b>Table 3.5-7</b>	Cumulative Effects for Water Quality
<b>Table 3.5-8</b>	Change in Sub-Watershed Road Density
<b>Table 3.5-9</b>	Watershed Impact Area
<b>Table 3.6-1</b>	2009 and 2010 Stream Temperature Summary for South Fork Mill Creek Located on the Barlow Ranger District Just Downstream of Crow Creek Reservoir
<b>Table 3.6-2</b>	Definition of Wood Size Classes East of the High Cascades
<b>Table 3.6-3</b>	Existing Number of In-Channel Woody Debris and Woody Debris Density vs. the Forest Plan, PIG, and NOAA Standards (total of both medium and large size classes)
<b>Table 3.6-4</b>	Existing Number of Pools; Primary Pools (pools $\geq 3'$ depth) Frequency vs. The Forest Plan Standard; and Frequency of Pools of all Depths vs. the PIG and NOAA Standards
<b>Table 3.6-5</b>	List of Proposed, Endangered, Threatened, or Sensitive (PETS) Fish and Aquatic Mollusk Species Found on the Mt. Hood National Forest and Addressed under the Biological Evaluation

- Table 3.7-1** The Status of Threatened, Endangered, and Proposed Species; Forest Service Region 6 Sensitive Species; Special Status Species; and Management Indicator Species on the District
- Table 3.7-2** Percent of Suitable Habitat in Core Area and Home Range
- Table 3.7-3** Management Indicator Species for the Project Area.
- Table 3.7-4** Focal Migratory Bird Species for this planning area
- Table 3.9-1** Oregon State Noxious Weed List
- Table 3.10-1** ACS Objective Indicators in the EA
- Table 3.10-2** ACS Objective Indicators for Each Alternative
- Table 3.11-1** Length of North Section Line Trail within 660 ft of Proposed Treatment Units

## List of Figures

- Figure 1-1** Vicinity Map of The Dalles Watershed Phase II Planning Area
- Figure 1-2** Existing Conditions within The Dalles Watershed Interior
- Figure 1-3** Desired future condition in The Dalles Watershed. Photo A is the target canopy cover. Photo B is a stand that has been thinned and underburned in the mid-1990s.
- Figure 1-4** Mt. Hood National Forest Land & Resource Management Plan (Forest Plan) Land Use Allocations within The Dalles Watershed Phase II Planning Area
- Figure 1-5** Northwest Forest Plan Land Use Allocations within The Dalles Watershed Phase II Planning Area
- Figure 1-6** Proposed Action Map for The Dalles Watershed Phase II
- Figure 2-1** Proposed Logging Systems and Temporary Roads within the Project Area
- Figure 3.1-1** Fire Regime Map of The Dalles Watershed
- Figure 3.1-2** Condition Class Map of The Dalles Watershed
- Figure 3.1-3** Flame Length and Fire Suppression Interpretation
- Figure 3.2-1** 2010 The Dalles Air Quality Index
- Figure 3.3-1** Mature/Over-mature Stand
- Figure 3.3-2** Dense Multi-story Stand

**Figure 3.3-3** Example of Root Disease Pocket and Associated Downed Wood Fuel Concentrations from the Mill Creek watershed

**Figure 3.3-4** Target Canopy Cover

**Figure 3.5-1** Map of the Water Quality Analysis Area

**Figure 3.5-2** U. S. Forest Service Water Temperature Monitoring Sites

**Figure 3.7-1** Comparison of Current and Reference Condition for Snag Densities



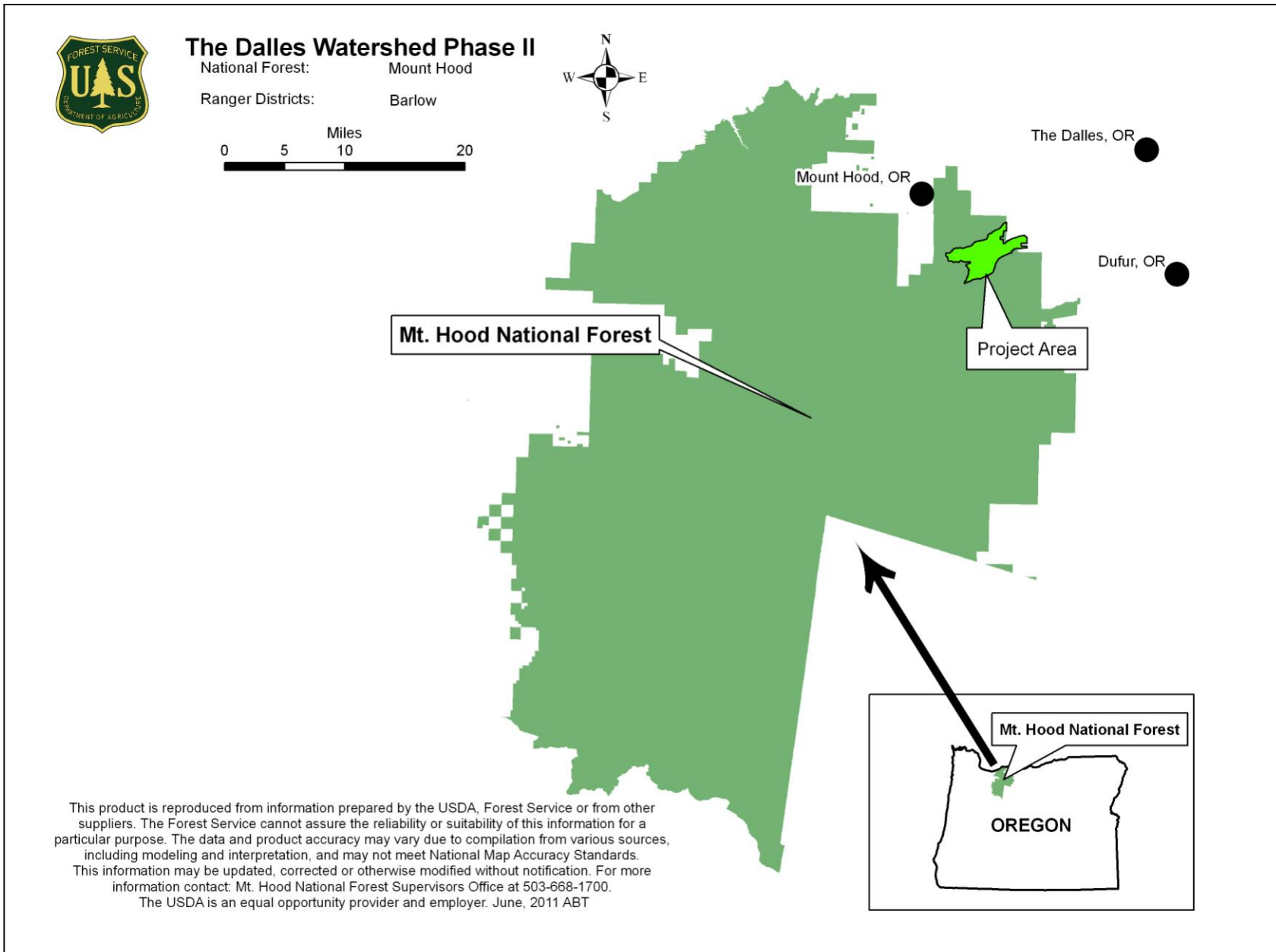
## SUMMARY

The City of The Dalles Municipal Watershed hazardous fuels reduction project is located primarily in the South Fork Mill Creek Watershed on the Mt. Hood National Forest in Hood River and Wasco Counties. In February 2004, the City of The Dalles requested the Forest Service take action to improve and protect forest health on federally managed public lands within and adjacent to The Dalles Municipal Watershed. The Wasco County Community Wildfire Protection Plan identifies the watershed as a community at risk and high priority for treatment.

The overall purpose of this proposal is to protect water quality and restore forest health by reducing hazardous fuels within the City of The Dalles Municipal Watershed. The proposed activities would reduce the risk of an uncharacteristically severe wildfire, improve wildfire protection of the municipal watershed, and move the landscape toward more historic conditions. The current condition of the area is characterized by ponderosa pine/Douglas-fir and Douglas-fir/grand fir forest types with a vegetative composition and fuels profile that no longer represents what historically existed in the watershed. The overall stand structure has changed from a primarily open late successional, single-storied forest pattern, to one that is predominantly a closed multi-storied forest. These stands are also at a much higher density, which puts them at risk of uncharacteristic mortality of large trees and at risk of uncharacteristic fires and/or insect and disease outbreaks.

In order to restore stand health and create conditions whereby fire could function in a more natural role, hazardous fuels would be reduced on approximately 3,660 acres within The Dalles Municipal Watershed. Mechanical fuels reduction treatment methods would consist of tree thinning (including the sale of vegetative material), machine piling of woody material, and hand thinning. Prescribed burning (underburning) would be used in combination with mechanical treatments or with limited non-mechanized (hand falling) treatments. After all treatments are completed, the goal is to have 10 tons of fuels per acre or less remaining on the ground in order to move this area towards the desired condition of what historically existed.

The Proposed Action is located approximately 16 air miles South West of The Dalles, Oregon, and is located with the city of The Dalles Municipal Watershed. The legal description for the project area is: T 1S, R 10E sections 13, 14, 22, 23, 24, 25, 36 and T 1S, R 11E, sections 4, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 31, 32.



**Figure 1-1:** Vicinity Map of The Dalles Watershed Phase II Planning Area

## CHAPTER 1 – INTRODUCTION

The Forest Service has prepared this Preliminary Assessment in compliance with the National Environmental Policy Act (NEPA), the Healthy Forest Restoration Act (HFRA), and other relevant Federal and State laws and regulations. HFRA projects may be applied to Federal land within a municipal watershed according to the list of the hazardous fuels authorized projects by the regulations under Section 102(a)(2) and 102(a)(3). Specifically, HFRA states that hazardous fuels projects can occur within a municipal watershed where a significant risk exists for a fire disturbance event to adversely affect the water quality of the municipal water supply or the maintenance of the system, including a risk to water quality posed by erosion following such a fire disturbance event [HR 1904, Section 102(a)(2) and 102(a)(3)].

The City of The Dalles Municipal Watershed was identified as a municipal watershed before the establishment of the Mt. Hood National Forest. The municipal watershed consists of approximately 25,500 acres that is mostly on National Forest land. The objective to manage this area to maintain high quality drinking water was formalized between the City of The Dalles and the United States Department of Agriculture (USDA) in a 1912 cooperative agreement. This agreement was completed “for the purpose of conserving and protecting the water supply of Dalles City, Oregon” and generally identified obligations of each party which includes that the USDA would “extend and improve the Forest upon these lands by seeding and planting and by the most approved methods of silviculture and forest management”. Since the initial agreement between the City of The Dalles and USDA, further direction has been issued through the 1972 document entitled “Comprehensive Management Plan – The Dalles Municipal Watershed” and the 1972 Memorandum of Understanding (MOU) between The Dalles and US Forest Service. Therefore, the watershed is managed jointly by the Forest Service and the City, according to a Memorandum of Understanding (MOU) and a subsequent Comprehensive Management Plan (December, 1972). The basic objective for managing this watershed is to maintain or restore the present quality and quantity of water received from the major sub-drainages. Also, it is emphasized in the MOU that water quality will take priority over water quantity in management decisions.

In February 2004, the City of The Dalles requested the Forest Service take action to improve and protect forest health on federally managed public lands within and adjacent to The Dalles Municipal Watershed (Mill Creek Municipal Watershed). The primary objective of their request is to reduce the risk to water quality from catastrophic wildfire by restoring forest health.

Additionally, the Wasco County Community Wildfire Protection Plan (CWPP) identified the watershed as a community at risk and high priority for treatment:

*Mill Creek Municipal Watershed is the source of water for the City of The Dalles. It is unpopulated but has high values because of the importance of the water supply for the city. Its risk for fire starts is moderate since there are few homes involved and fire occurrence has been moderate over the past ten years. However, the hazard rating is one of the highest based on the heavy forest fuels throughout the watershed and the strong potential for crown fires. Values protected received the highest rating for all communities because of the importance of the water supply provided (Wasco County, CWPP, page 50).*

As part of the CWPP, The Dalles Municipal Watershed was identified as one of the highest

priorities for treatment according to a risk rating and recommendations from the Oregon Department of Forestry. The rating is based on severe weather conditions, steep slopes with an east facing aspect, and heavy fuels loads with potential long flame lengths and high crown fire likelihood (CWPP, p. 50).

In order to meet the request from the City of The Dalles as well as the management direction within the MOU and CWPP, the Forest Service has been implementing a phased approach to treating the hazardous fuels within the municipal watershed. Phase I (The Dalles Watershed Fuelbreak) is currently treating approximately 1,400 acres along the perimeter of the municipal watershed. Phase II is being considered and analyzed in this Preliminary Assessment. Phase II would reduce approximately 3,660 acres of hazardous fuels within the interior of the watershed. Additional phases and the current approach are discussed more in Section 1.2, Background.

## 1.1 Document Structure

This Preliminary Assessment discloses the direct, indirect, and cumulative environmental effects that would result from the Proposed Action and No Action (baseline) alternatives. The document is organized into four parts:

- *Introduction:* The section includes information on the history of the project proposal, the purpose and need for action, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service facilitated a collaboration process among state, local and tribal governments, non-governmental organizations, and interested parties as required by HFRA, as well as how the Forest Service informed the public of the proposal and how the public responded.
- *Alternatives, including the Proposed Action:* This section provides a more detailed description of the Proposed Action and No Action Alternatives. This discussion also includes design criteria and mitigation measures that were added as a result of environmental analysis.
- *Environmental Consequences:* This section describes the environmental effects of no action as well as the trade-offs and effects of implementing the action alternative. This analysis is organized by resource area. Within each section, the existing environment is described first, followed by the estimated effects of no action that provides a baseline for evaluation, and finally the estimated effects of the action alternatives.
- *Consultation and Coordination:* This section provides agencies consulted during the development of the Preliminary Assessment and a list of preparers.

Additional documentation, including more detailed analyses of project area resources, may be found in the project planning record located at the Barlow Ranger District Office in Dufur, Oregon.

## 1.2 Background

The need for reducing severe fire risk was first identified by the City of The Dalles based on concern for future fires. Past fires have caused damage that has led to the water treatment plant

being shut down. In 1967, the School Marm Fire resulted in large impacts to water quality within The City of The Dalles Municipal Watershed. The plant had to be shut down and could not treat water to make it safe for drinking. There was sediment run-off and turbidity was measured at 25,000 units (which was the highest municipal watershed reading until Mt. St. Helens erupted in 1980). Once turbidity was reduced to 5,000 units after a couple of weeks, the plant was turned back on; however, adverse amounts of soil and mud clogged the system which caused the plant to be shut down again. The Sheldon Ridge Fire (12,000 acres) in 2002 shut down the water treatment system as well. While the fire did not get into the South Fork Mill Creek watershed, the water treatment plant was shut down because it had to be evacuated as it was in front of the rapidly-advancing wind-driven fire.

Under the authorities of the HFRA, the Hood River and Barlow Ranger Districts convened a collaborative working group to assist with developing recommended actions for the South and North Fork Mill Creek planning areas. The collaborative group developed a phased approach to reducing the hazardous fuels within the watershed and protecting the City of The Dalles Municipal Watershed. The collaborative group developed a list of priorities for thinning treatments within the watershed. The prioritization criteria by the collaborative group sub-committee include the following:

- Area has missed one fire cycle;
- Area has missed two or more fire cycles;
- Existing condition poses a threat to life or property (i.e., adjacent landowners);
- Trees to be removed are less than 12-inches diameter breast height (dbh);
- Stand is stocked beyond sustainable stocking levels as indicated by site index or current mature tree growth rates;
- Species encroachment has occurred due to fire exclusion;
- Dead and dying trees make up more than 7 percent of mature stand;
- Treatment would reduce fire regime condition class two levels, from Level 3 to Level 1;
- Treatment anticipated to reduce fire behavior or intensity as indicated by modeling or other tools;
- Treatment can occur without construction of new permanent roads;
- Suspended or aerial yarding would be utilized;
- Treatment, including mitigation measures/project design criteria, can occur with little or no increase in soil compaction;
- Treatment would provide a condition that would allow use of prescribed fire (where appropriate) for maintenance;
- Thinning can occur concurrent with other management activities such as reduction in downed wood, ladder fuels, or brush (efficiency); and,
- Multiple benefits can be achieved through the activity (i.e., reduce risk to water quality plus habitat protection or improvement, or provide public firewood cutting, or biomass utilization).

The prioritization was used to develop the recommendations and Proposed Action for The Dalles Watershed Fuelbreak which was Phase I for hazardous fuels reduction within the municipal watershed. Overall, Phase I analyzed reducing hazardous fuels on approximately 1,540 acres and Barlow Ranger District currently is implementing the Fuelbreak, which is treating approximately

1,400 acres. This project focuses on reducing fuel loadings and reducing tree density to provide for better protection along the perimeter of, and along roads within, this municipal watershed. All the acres within the planning area were not carried forward into implementation in order to address resource concerns and adequately buffer resources, including streams and trails.

The Dalles Watershed Phase II project builds upon the work completed with The Dalles Watershed Fuelbreak by reducing hazardous fuels within the interior of the watershed. The project's proposed treatments are on the National Forest System lands as well as the City of The Dalles lands within the watershed. In December 2010, the City requested assistance with prescribed underburning on the City owned lands within the watershed. In order to help meet this need, the Responsible Official decided to incorporate the City lands into this project.

The Mill Creek Collaborative group was reconvened to continue their discussion on hazardous fuels reduction within the interior of the watershed. Collaborative participants met from August 2010 to December 2010. The community collaborative group was composed of participants from: federal and state agencies (Forest Service, Oregon Department of Forestry, Oregon Department of Fish and Wildlife, and Oregon Department of Environmental Quality); watershed councils and local agencies (Wasco County Soil and Water Conservation District, City of The Dalles, Mill Creek Watershed Group, and Hood River Watershed Group); environmental groups (Bark and Oregon Wild); private citizens; neighboring landowners; and timber industry. The collaborative group recommended developing hazardous fuel reduction treatments that would restore forest stand health and allow for fire to play a more natural role as well as implementing a variety of restoration activities to improve the overall forest health in the planning area. The specific restoration recommendations are listed in Appendix 1 of this Preliminary Assessment.

This project follows the prioritization that was previously developed by the collaborative group and analyzes reducing fuels on approximately 7,278 acres. This project focuses on reducing fuel loadings and reducing tree density within the interior of the watershed. All the acres within the planning area were not carried forward into implementation in order to address resource concerns and adequately buffer resources, including streams. The Proposed Action would treat approximately 3,660 acres within the watershed and provide protect to the municipal water supply for the City of The Dalles. The Proposed Action is described in detail in Sections 1.4 and 2.2.2.

To date, hazardous fuels have been reduced on approximately 20 percent of the municipal watershed lands, including City of The Dalles in-holdings. An additional 15 percent has been considered and analyzed, but no treatment has been implemented or proposed for implementation at this time. These acres may be re-considered in the future, if the need arises. Future projects within the watershed may concern additional fuels reduction treatments and prescribed burning. Phase III may consider mechanical and prescribed burning activities in the interior of the watershed to fully connect the units from Phase I and Phase II. Additional phases may consider treatments within the Late-Successional Reserves (LSR) that are located within and adjacent to the watershed. For more information on the reasons the LSR have not been considered to date, please see Section 2.3, Alternatives Considered, but Eliminated from Detailed Study. These additional acres have not been treated to date because the priority has been to address the highest risk acres in order to effectively protect and restore watershed conditions within watershed, reduce the risk of large stand replacing wildfire events in the watershed, and reduce hazardous fuel loadings and fuel ladders.

### **1.3 Purpose and Need for Action**

Fire suppression efforts over the past 100 years, favorable climatic conditions, vegetation growth and dead fuels resulting from insects and diseases have altered stand composition and structure, and increased tree and brush densities. The high density of the stands contributes to mortality of trees because of competition for nutrients, water and sunlight. Insects and diseases are more likely to kill trees that grow in dense, crowded conditions. Dwarf mistletoe-infected trees, diseased trees, insect-killed trees, and down fuel are creating continuous fuel ladders from the ground to the tree crowns. The majority of National Forest System lands in the project area have been mapped as Condition Class 3, indicating these lands have missed multiple natural fire events and now contain unnaturally high fuel situations. A portion of the City of The Dalles Watershed (about 14%) is within Condition Class 2, indicating these lands have departed (either increased or decreased) from historical frequencies by more than one return interval and fuel levels have increased beyond the natural levels. As such, fire regimes have been moderately to significantly altered from their natural range; the risk of losing key ecosystem components is moderate to high; and vegetation attributes have been appreciably altered. Diseased trees, insect killed trees, and down fuel are creating continuous fuel ladders from the ground to the tree crowns (see Figure 1-2).

Because of these conditions, there exists the threat that a catastrophic fire could damage the municipal water supply. Therefore, the overall purpose of this project is to protect water quality within the City of The Dalles Municipal Watershed. This need is primarily based on the MOU between the City of The Dalles and the Forest Service that states that water quality will take priority over water quantity in management decisions (MOU for The Dalles Municipal Watershed, 1972).

In order to protect and restore watershed conditions within the City of The Dalles Watershed, there is the underlying need to:

- Restore the existing fire condition class (Condition Classes 2 & 3) to a more historical fire regime (Condition Class 1);
- Move younger stands toward a more historic condition that includes more fire resistant stands;
- Reduce the risk of large stand replacing wildfire events in the watershed using management strategies, such as prescribed burning, masticating of underbrush, reducing down woody fuels, and thinning overstory and understory trees (thinning from below); and,
- Reduce hazardous fuel loadings and fuel ladders (small reproduction that increases potential for crown fire initiation) so that the risk of unwanted effects of wildfire on National Forest System lands and City of The Dalles in-holdings within the municipal watershed are lessened.

#### **1.3.1 Management Direction**

The Dalles Watershed Phase II project is proposed to respond to goals and objectives of the National Fire Plan (2000) and the Mt. Hood Land and Resource Management Plan, as amended (US Forest Service, 1990a). Also, the project follows the direction set forth in the MOU for The Dalles Municipal Watershed between Mt. Hood National Forest and City of The Dalles (1972) and the recommendations in the Mill Creek Watershed Analysis (US Forest Service, 2000). This Preliminary Assessment has been completed in accordance with direction contained in the National Forest Management Act, the National Environmental Policy Act, the Council on Environmental Quality regulations, Clean Water Act, the Endangered Species Act and other applicable laws,

policies and regulations. As directed by the Pacific Northwest Regional Forester, this project uses the sensitive species lists from January 31, 2008.

The applicable National Fire Plan goal and objective include:

*Reducing hazardous fuels (dry brush and trees that have accumulated and increase the likelihood of unusually large fires) in the country's forests and rangelands. In response to the risks posed by heavy fuels loads -- the result of decades of fire suppression activities, sustained drought, and increasing insect, disease, and invasive plant infestations -- the National Fire Plan established an intensive, long-term hazardous fuels reduction program. Hazardous fuels reduction treatments are designed to reduce the risks of catastrophic wildland fire to people, communities, and natural resources while restoring forest and rangeland ecosystems to closely match their historical structure, function, diversity, and dynamics. Such treatments accomplish these goals by removing or modifying wildland fuels to reduce the potential for severe wildland fire behavior, lessen the post-fire damage, and limit the spread or proliferation of invasive species and diseases. Treatments are accomplished using prescribed fire, mechanical thinning, herbicides, grazing, or combinations of these and other methods. Treatments are being increasingly focused on the expanding wildland/urban interface areas.*

This Preliminary Assessment is tiered to the Mt. Hood National Forest Land and Resource Management Plan Final Environmental Impact Statement (US Forest Service, 1990b) and Record of Decision (US Forest Service, 1990c), and incorporates by reference the accompanying Forest Plan. The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. Goals, objectives and desired future conditions of the management areas within the project area are discussed below in the description of land allocations. In addition, management direction for the area is provided in two major Forest Plan amendments:

- The Northwest Forest Plan (NWFP) - *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (1994);
- Survey and Manage – *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (2001); and,
- Invasive Plants– *Pacific Northwest Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision* (2005).

The MOU for The Dalles Municipal Watershed between Mt. Hood National Forest and City of The Dalles provides management direction for any treatments within the municipal watershed, which includes the entire planning area. The basic objective for managing this watershed is to maintain or improve the present quality and quantity of water received from the major sub-drainages and at the Wicks Treatment Plan. Water quality will take priority over the water quantity in management decisions (MOU, 1972 p. 3). The management objectives for the watershed as listed in Appendix D of the MOU are as follows:



1. Management plans and decisions must meet the intent of the original 1912 cooperative agreement between the City of The Dalles and the U.S. Department of Agriculture.
2. The principal and most important use of this watershed is as a municipal water supply. Water is the basic recourse to be produced. Over 95 percent of the city water supply will be obtained from the watershed.
3. The basic objective for managing this watershed is to maintain or improve the present quality and quantity of water received from the major sub-drainages and at the Wicks Treatment Plant. Water quality will take priority over water quantity in management decisions.
4. Consistent with the basic objective, the secondary objective is to provide for maximum compatible development and use of the watershed land's share of resource and activity programs.
5. Management plans must consider that the watershed includes all lands, public and private, which are drained or diverted into the South Fork of Mill Creek above the Wicks Treatment Plant.
6. Resource and activity use and development programs on public lands will be allowed only on regulated basis.
7. Approved resource and activity programs will be introduced on an incremental basis, which each increase being tested for its compatibility with the basic water quality and quantity criteria.
8. The Forest Service and the City of The Dalles will initiate only those resource and activity program which have the approval of both parties. Both agencies will be involved at all levels of planning, implementing and monitoring resource and activity programs.

Additional guidance for the project area is provided by the Mill Creek Watershed Analysis and Surveyor's Ridge Late-Successional Reserve Assessment (US Forest Service, 1997). The watershed analysis and LSR assessment give direction and provide guidance and recommendations to limit destructive crown fire, limit insect and disease mortality, and reduce stand density and fuel loads. Specifically, the Watershed Analysis states that the first recommendation for the South Fork is "prioritize stands for fuels reduction (prescribed underburning) and reintroduction of fire."

### **1.3.2 Desired Future Conditions and Land Allocations**

The desired future condition of the project is to develop an uneven-aged stand with canopy closure that would allow fire behavior to change from crown fire to surface fire, and to have stand species composition reflecting Condition Class 1 (ponderosa pine, western larch, white oak, and dry-climate Douglas-fir). Achieving this desired future condition would enable meeting the overall goals of the land allocations within the project area (see Figure 1-3).

Several land allocations as designated by the Forest Plan and Northwest Forest Plan are found within the project area (see Figures 1-4 and 1-5). The two primary Forest Plan land use allocations in the planning area are Special Emphasis Watershed (B6) and Research Natural Area (A3). In addition, the secondary Forest Plan land use allocations are Roaded Recreation (A6), Northern Spotted Owl Habitat Area (A8), Pileated Woodpecker/Pine Marten Habitat Area (B5), Scenic Viewshed (B2), Roaded Recreation (B3), Deer and Elk Winter Range (B10), and Timber Emphasis (C1). Where these secondary land use allocations have more stringent standards and guidelines than

the primary land use allocations, the secondary land use allocations standards and guidelines would be followed.

The goal for Special Emphasis Watershed (B6) is to maintain or improve watershed, riparian, and aquatic habitat conditions and water quality for municipal uses and/or long-term fish production. A secondary goal is to maintain a healthy forest condition through a variety of timber management practices (Forest Plan p. 4-246). The goal for Research Natural Areas (A3) is to preserve examples of natural ecosystems in an unmodified condition for research and education, and to provide areas to serve as a baseline against which human impacts on natural systems can be measured (Forest Plan p. 4-145). Lastly, the goals for Northern Spotted Owl Habitat Area (A8) and Pileated Woodpecker/Pine Marten Habitat Area (B5) were instrumental in providing management direction for some of the treatments within the planning area. The goal for Northern Spotted Owl Habitat Area is to protect and manage old growth and mature forest habitat to maintain a viable population of northern spotted owls well distributed across the Forest (Forest Plan p. 4-174). The goal for Pileated Woodpecker/Pine Marten Habitat is to provide Forestwide mature or old growth forest habitat blocks of sufficient quality, quantity and distribution to sustain viable populations of pileated woodpecker and pine marten. A secondary goal is to maintain a healthy forest condition through a variety of timber management practices (Forest Plan p. 4-240).

For Special Emphasis Watershed (B6), the major characteristics for the desired future condition as related to this project are (Forest Plan p. 4-247):

- Depending on the inherent sensitivity of each special emphasis watershed, no more than 25 percent of the watershed area will be in a hydrologically disturbed condition at any time;
- Extensive stands or trees at various stages of development, arranged in a mosaic pattern, influenced by drainage patterns, geology, soils, and avoidance of sensitive watershed lands are prevalent; and,
- Riparian areas approximate natural conditions.

For the Research Natural Area (A3), the major characteristics for the desired future condition as related to this project are (Forest Plan p. 4-146):

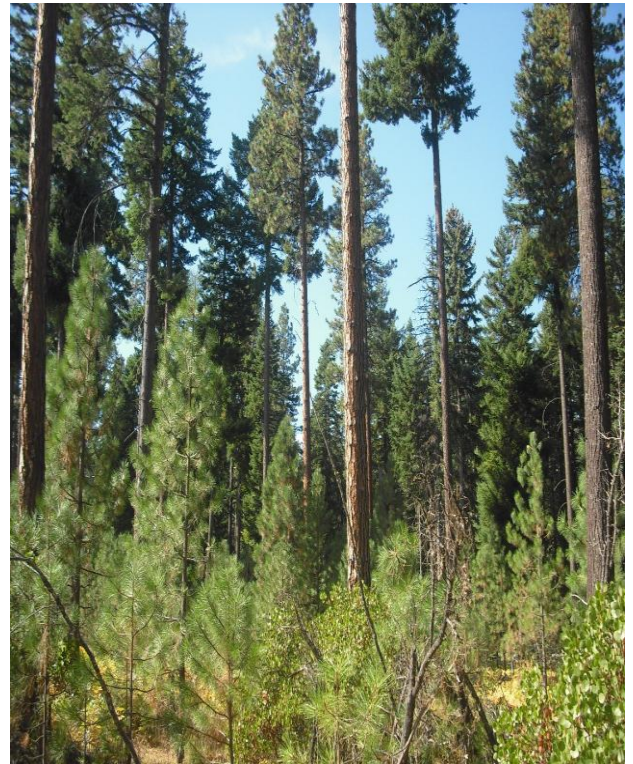
- Contains a representative or unique plant community and serves as a gene pool reserve for native plant and animal species;
- Natural processes in undisturbed conditions predominate; and,
- Provides opportunities for research and studies of natural processes.

Only limited treatments are proposed within the research natural area in order to achieve the desired future condition and to meet the standards and guidelines of prescribed fire, in particular A3-047 and A3-048. Standard and Guidelines A3-047 and A3-048 (Forest Plan p. 4-150) state: “Prescribed fire may occur;” and, “Unless required to provide protection to adjacent non-RNA acreage, fuels treatment shall not occur where the sole purpose of the project is fire hazard reduction.”





**Figure 1-2a** – Dense multi-storied stand



**Figure 1-2b** – Mature/Over-mature stand



**Figure 1-2c:** Existing Hazardous Fuels Condition – Fuel Model 10

**Figure 1-2:** Existing Conditions within The Dalles Watershed Interior  
*Photos a and b taken by The Dalles Watershed Council*

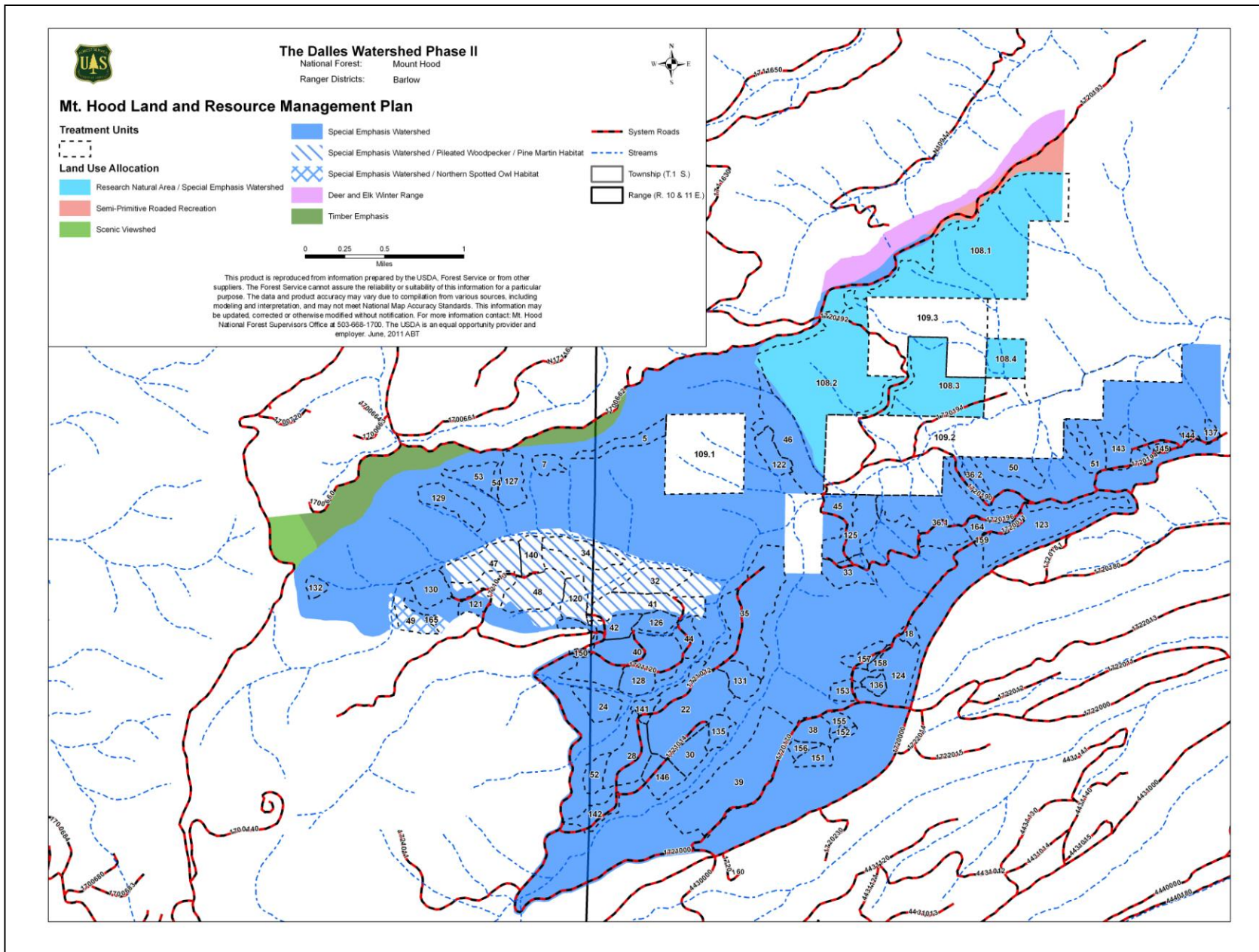
*Barlow Ranger District  
Mt. Hood National Forest*



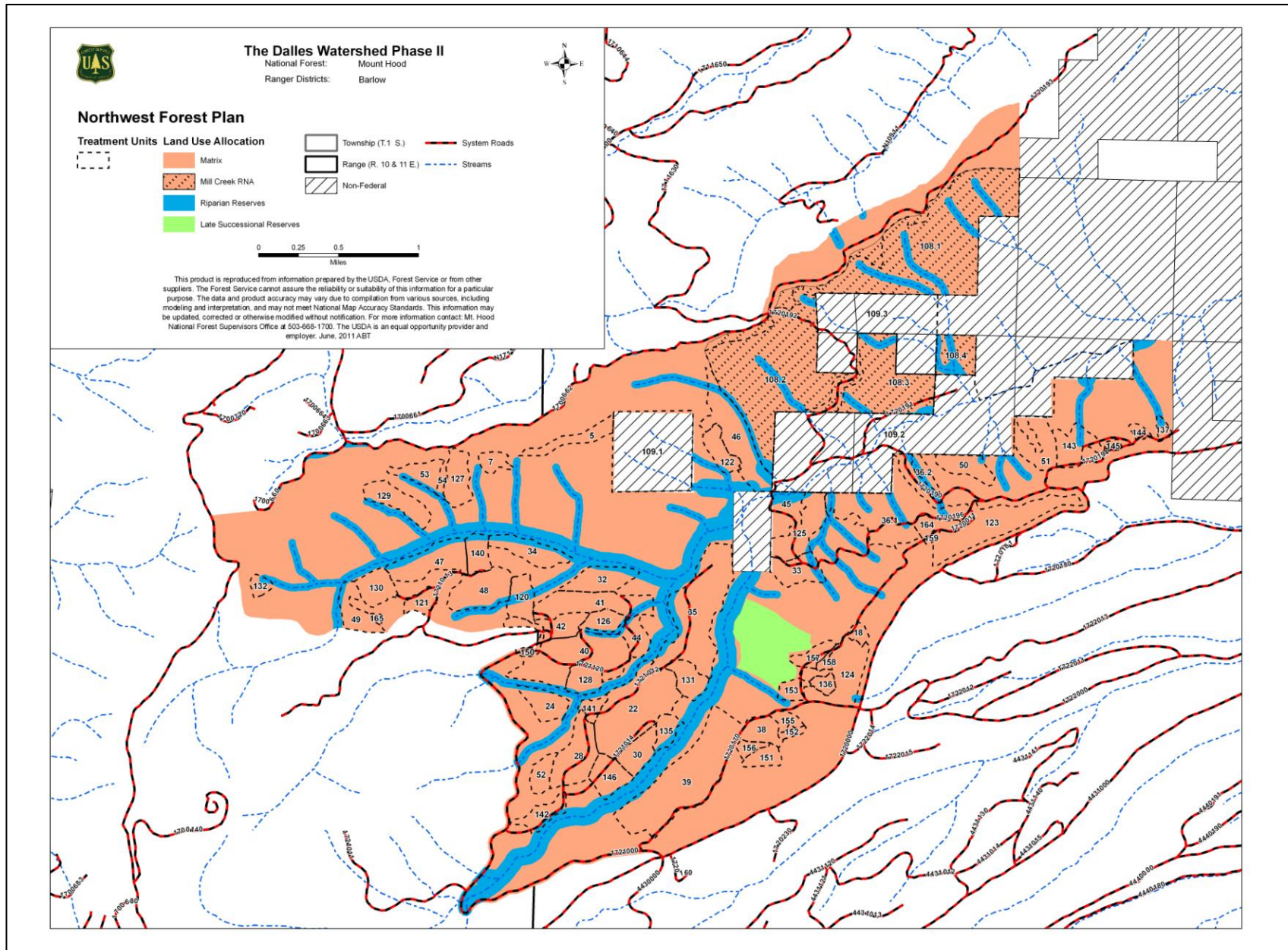


**Figure 1-3:** Desired future condition in The Dalles Watershed. Photo A is the target canopy cover. Photo B is a stand that has been thinned and underburned in the mid-1990s.





**Figure 1-4:** Mt. Hood National Forest Land & Resource Management Plan (Forest Plan) Land Use Allocations within The Dalles Watershed Phase II Planning Area



**Figure 1-5:** Northwest Forest Plan Land Use Allocations within The Dalles Watershed Phase II Planning Area



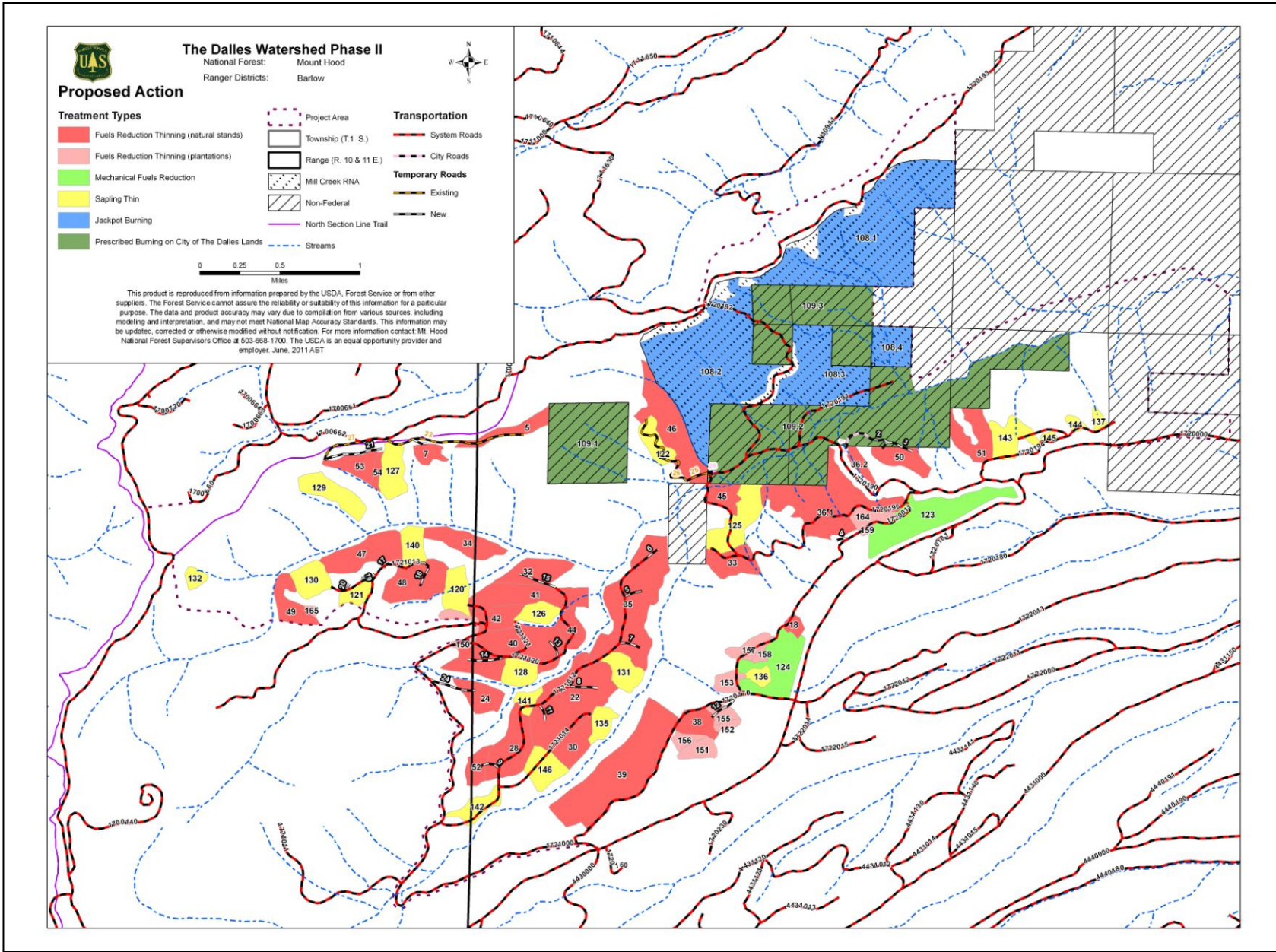
The major Northwest Forest Plan allocations within the planning area are riparian reserves and matrix. Riparian reserves include areas along rivers, streams, wetlands, ponds, lakes, and unstable or potentially unstable areas where the conservation of aquatic and riparian-dependent terrestrial resources receives primary emphasis. Matrix areas consist of Forest Service lands outside of designated areas (i.e., Congressionally Reserved Areas, LSRs, Adaptive Management Areas, Administratively Withdrawn Areas, and Riparian Reserves). Most timber harvest and other silvicultural activities are conducted in portions of matrix with suitable forest lands. The planning area also includes the Mill Creek Tier 1 Key Watershed. Tier 1 Key Watersheds were designated as sources for high water quality; they contain at-risk anadromous fish.

## **1.4 Proposed Action**

This hazardous fuels reduction project is located primarily in the South Fork Mill Creek Watershed on the Mt. Hood National Forest in Hood River and Wasco Counties. Vegetation includes mixed conifer forests, meadows, and open grassy slopes. Average annual precipitation ranges from 50 inches on the west side to 30 inches on the east side, occurring mostly during the winter months. Elevation in areas proposed for treatment ranges from 2,500 to approximately 5,000 feet. The project area includes The Dalles Municipal Watershed, which is the primary water supply for the City of The Dalles, Oregon. The water supply serves over 12,000 residents and is closed to public access. The Dalles Municipal Watershed Management Unit actually encompasses portions of two separate watersheds: Dog River, a tributary to the East Fork Hood River; and South Fork Mill Creek, the major tributary in the Mill Creek Watershed. Water is diverted from Dog River and transported over to the South Fork Mill Creek system where it is stored in the Crow Creek Reservoir along with flow from Crow Creek, Alder Creek and South Fork Mill Creek. This water is then used by the City of The Dalles.

In order to respond to the needs for action outlined in Section 1.3, the Proposed Action would reduce hazardous fuels on approximately 3,660 acres within The Dalles Municipal Watershed. The mechanical fuels reduction treatment methods would consist of tree thinning including the sale of vegetative material, machine piling of woody material, hand thinning, and mastication. Prescribed burning (underburning) would be used in combination with mechanical treatments or with limited non-mechanized (hand falling) treatments. The intent is to move this area more toward the desired future condition of what historically existed. After all treatments are completed, the goal is to have 10 tons of fuels per acre or less remaining on the ground in order to meet the purpose and need for action for this project.

In order to reduce hazardous fuels, smaller diameter trees growing in lower crown positions would be removed, leaving more space around remaining larger trees. Trees would be selected for removal if their spacing facilitates the spread of a crown fire (canopy closure), or a tree form contributes to the initiation of a crown fire (crown base height) such as low growing tree branches over brush, which if ignited, could lead to crown fire initiation. Activity fuels (residue from mechanical treatments such as masticated material and thinning) as well as naturally accumulated fuels would be treated by piling and burning. Stands where the dominant species and fire regime are appropriate, such as ponderosa pine, Douglas fir, and western larch which are adapted to low intensity, frequent fire return intervals, would be treated so that future underburning could occur to maintain stand conditions. The proposed treatments to achieve these goals are shown in the table below. All



**Figure 1-6:** Proposed Action Map for The Dalles Watershed Phase II  
Barlow Ranger District  
Mt. Hood National Forest  
1-14



proposed treatment areas are shown on the Proposed Action map, and include riparian buffers and buffers around known northern spotted owl nesting sites (see Figure 1-6). A description of each treatment type can be found in Section 2.2.2, Proposed Action of this Preliminary Assessment. Section 2.2.2 includes additional information on variable density thinning, fuels reduction activities, and road reconstruction/maintenance work.

**Table 1-1: Proposed Action Treatment Acres**

<b>Treatment</b>	<b>Acres</b>
Fuels Reduction Thinning (natural stands)	1352
Fuels Reduction Thinning (plantations)	107
Sapling Thin	435
Jackpot Burning	742
Prescribed Burning on City of The Dalles Lands	872
Mechanical Fuels Reduction	151
Total Acres	3660

## 1.5 Decision Framework

Based on the interdisciplinary analysis presented in this Preliminary Assessment and the project record, the Forest Supervisor will decide whether or not to authorize the implementation of hazardous fuels reduction activities within The Dalles Municipal Watershed; and what, if any, project design criteria/mitigation measures are needed.

## 1.6 Public Involvement

### 1.6.1 Collaboration

This project lies within the zone identified in the Wasco County CWPP as the highest priority for treatment. The CWPP was prepared in a collaborative effort by individuals and agencies in Wasco County. In addition, the Barlow Ranger District convened the Mill Creek Collaborative Group, which previously collaborated to identify specific projects within the North Fork and South Fork Mill Creek planning areas. These collaborative efforts have resulted in two projects which are currently being implemented: 1) The Dalles Watershed Fuelbreak on the Barlow and Hood River Ranger Districts; and, 2) North Fork Mill Creek Restoration Opportunities on the Hood River Ranger District.

The following project specific collaborative efforts were undertaken on this project:

- On August 6, 2010, the Barlow Ranger District sent out an invitation for a collaboration meeting for those interested in helping to design fuels reduction and restoration projects in the interior of The Dalles Municipal Watershed. Invitations were mailed to Federal, State, and local agencies, the Confederated Tribes of Warm Springs, environmental advocacy groups, adjacent property owners, recreational groups, and the general public. The Forest Service also posted the letter announcing the meeting on the Forest Service website (<http://www.fs.usda.gov/goto/mthood/projects>).

- Ten people attended the first collaboration meeting held at the Hood River Court House in Hood River, Oregon on August 26, 2010 including participants from federal and state agencies (Forest Service, Oregon Department of Forestry), watershed councils and local agencies (Wasco County Soil and Water, The City of The Dalles, Mill Creek Watershed Group, Hood River Watershed Group), environmental groups (Bark, Oregon Wild, and Rocky Mountain Elk Foundation), private citizens, neighboring landowners, and timber industry (High Cascade Inc.)
- Collaborative participants met from August 2010 through December 2010 to identify possible solutions to maintaining water quality standards in relation to future fire. The collaborative group recommended developing fuels treatments that would restore forest stand health and allow for fire to play a more natural role as well as implementing a variety of restoration activities to improve the overall forest health within the municipal watershed. Appendix 1 contains the final collaborative group recommendations for this project.
- On October 1 and October 6, 2010, the Barlow District Ranger invited the collaborative group on two field trips to review previously completed fuels reduction projects within the watershed and to review potential treatment units for this project. Eleven people attended the field trip and their comments were incorporated into final collaborative group recommendations that can be found in Appendix 1.

### 1.6.2 Scoping/Public Involvement

The Dalles Watershed Phase II was listed in the Mt. Hood National Forest quarterly planning newsletter (Schedule of Proposed Actions [SOPA]) beginning in October 2010. The project was also listed on the Mt. Hood National Forest beginning in October 2010 at:

<http://www.fs.usda.gov/goto/mthood/projects>. No comments were received through that effort. In March 2011, a letter providing information and seeking public comment was mailed to approximately 150 individuals and groups. As required by HFRA, a public meeting was held on April 6, 2011 at the Barlow Ranger Station in Dufur, Oregon. The meeting was announced in *The Oregonian* on March 25, 2011. No individuals attended the meeting. During the comment period, the Forest Service received seven comment letters, which were from Bark, Oregon Wild, American Forest Resource Council, and four individuals. A summary of the scoping comments are found in Appendix 2. A full content analysis and copies of all scoping letters are available in the project record available at the Barlow Ranger District located in Dufur, Oregon.

### 1.7 Issues

Issues serve to highlight effects or unintended consequences that may occur from the proposed action and alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the Responsible Official and public to understand. Issues are best identified during scoping early in the process to help set the scope of the actions, alternatives, and effects to consider; but, due to the iterative nature of the NEPA process, additional issues may come to light at any time. Issues are statements of cause and effect, linking environmental effects to actions, including the Proposed Action (Forest Service Handbook 1909.15, 12.4). Issues are used to generate additional action alternatives to the Proposed Action. During the collaborative process and the

scoping comment period, no issues were brought forward that would generate additional alternatives. Although no issues were identified, there were several concerns that were raised which were specifically addressed in the project.

Using the comments from the collaborative effort, the general public and other agencies, the interdisciplinary team identified a list of concerns to address. Concerns identified during scoping were used to refine the Proposed Action presented in Section 2.2.2 as well as the effects analysis presented in Chapter 3. The description of the Proposed Action was updated to fully describe variable density thinning and the intention for larger trees within the treatment areas, including Ponderosa pine. Also, the Fire and Fuels Management (Section 3.1) was updated to fully address the concerns associated with fire regimes and effectiveness of the fuels reduction activities.

- **Diameter Limit:** Scoping comments received stated that the removal of large, old trees would not reduce fire risks. Specifically, a comment stated, “The scoping notice does not discuss whether there is an upper-diameter or age limit on the trees to be logged in this project. Most fire ecologists agree that removal of large, old trees is not ecologically justified and does not reduce fire risks. Such trees contribute to the resistance and resilience of the forest ecosystems of which they are a part.” Another comment stated, “The public supports the use of diameter limits because it provides a means to prevent economic values from trumping ecological values. It is often appropriate to use lower diameter limits for fire tolerant species like Ponderosa pine and Douglas fir, while using higher limits for fire intolerant species like grand fir/white fir.”

*This project does not establish a diameter limit in order to fully meet the purpose and need for action as stated in Section 1-3. Incorporating an upper diameter limit would limit the ability to remove some of trees that pose a fire risk within the treatments units. For example, trees over the diameter limit that are leaning and would increase the risk of crown fires would remain. Also, the overstocked and dense stands would remain and the hazardous fuels associated with the standing trees (fuel ladders) would not be removed. The vegetation resource section discusses the size of trees within the planning area and the effects that the Proposed Action would have on the retention of large trees within the project area. Discussion of this issue can be found in Section 3.1, Fire/Fuels Management and Section 3.3, Vegetation Resources.*

- **Large Tree Retention:** Scoping comments stated that removing large trees would not meet the objectives of the Healthy Forest Restoration Act. Specifically, HFRA Section 102(f) states that projects should be carried out in a manner that “(A) focuses largely on small diameter trees, thinning, strategic fuel breaks, and prescribed fire to modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildfire effects for the forest type (such as adverse soil impacts, tree mortality or other impacts); and (B) maximizes the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands.”

*The vegetation resource section discusses the size of trees within the planning area and the effects that the Proposed Action would have on the retention of large trees within the project area. Discussion of this issue can be found in Section 3.3, Vegetation Resources.*

*Consistency with the Healthy Forest Restoration Act, including large tree retention, is discussed in Section 2-5.*

- **Fire Regime:** Scoping comments suggest that the treatments proposed would be ineffective because they do not address the variety of fire regimes present in the project area. Scoping comments state: “Different locations of the same forest ecosystem type have had different historic fire regimes for a variety of reasons: subtle differences in climatic seasonality, lightning patterns, understory characteristics, site productivity (related to geology, soils, and/or climate), and potentially use by Native Americans.”

*The fuels section discusses fire regime / condition classes within the project planning area and discusses how these were used to develop the proposed treatments. Discussion of this issue can be found in Section 3.1, Fire/Fuels Management.*

- **Effectiveness of Fuels Reduction Activities:** Scoping comments state that the Proposed Action would not effectively reduce hazardous fuels levels because treatments in mixed-severity fire regimes should be patchy and leave behind more structure, more snags and large dead wood. Scoping comments state: “Treatments in forests with naturally mixed-severity fire regimes should be carefully scrutinized to ensure those areas: (i) are in fact outside of the historic range variability; (ii) treatment will not remove scarce habitat for focal species that depend on dense forests; (iii) treatments are in fact needed; and, (iv) proposed treatments will be effective.” Another example includes: “To restore ecological integrity, including the role of fire, treatments need to be tailored to site-specific conditions with an adaptive approach.”

*The fuels section discusses the effects of the proposed fuels reduction activities, including the beneficial effects to preventing catastrophic wildfire and restoring historic fire conditions. Discussion of this issue can be found in Section 3.1, Fire/Fuels Management.*

- **Monitoring:** Scoping comments stated that without proper monitoring and follow-up there could be an increase in the hazardous fuels conditions in the future because the additional thinning could be expected to stimulate the growth of future surface and ladder fuels. Specifically, the comments state: “Fuel treatments without regular follow-up treatments might be worse than doing nothing at all because thinning can be expected to stimulate the growth of future surface and ladder fuels.” Another comment asks the following question: “What will ensure adequate funding for long-term management of Phase I and Phase II areas to ensure that fire resiliency is maintained?”

*Each of the resource sections discusses the relevant and pertinent monitoring data. Specific monitoring results are discussed in the Soil Productivity, Watershed Resources, and Aquatic Resources sections of Chapter 3. Resource monitoring, such as water temperature monitoring, would continue as needed by the Forest Service. The City of The Dalles would continue water quality monitoring as part of their ongoing use of this municipal water source. The project may be monitored as part of the monitoring protocol established by the Forest Plan.*