

United States
Department of
Agriculture

Forest
Service



July
2008

North Fork Mill Creek Restoration Opportunities

Environmental Assessment

Hood River Ranger District Mt. Hood National Forest

Mt. Hood/Parkdale, Oregon

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

Lead Agency:	USDA Forest Service
Recommending Official:	Daina L. Bambe, District Ranger Hood River Ranger District
Responsible Official:	Gary L. Larsen, Forest Supervisor Mt. Hood National Forest
Information Contact:	Jennie O'Connor Card Hood River Ranger District 6780 Highway 35 Mt. Hood/Parkdale, OR 97041 (541) 352-6002 ext. 634 jennieoconnorcard@fs.fed.us

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Table of Contents

Table of Contents	i
List of Figures	iii
List of Tables	iii
Summary	vi
CHAPTER 1 – Introduction	1-1
Document Structure	1-1
Background	1-2
Purpose and Need for Action	1-3
Management Direction	1-4
Desired Future Condition / Land Allocations	1-5
Proposed Action	1-10
Decision Framework	1-13
Public Involvement	1-13
Collaboration	1-13
Scoping/Publication Involvement	1-14
Issues	1-15
CHAPTER 2 – Alternatives, including the Proposed Action	2-1
Alternative Formulation	2-1
Alternatives Considered in Detail	2-1
No Action Alternative	2-1
Alternative 1 – Proposed Action	2-2
Other Fuel Reduction Activities	2-11
Road Reconstruction/Maintenance	2-13
Alternative 2	2-16
Design Criteria/Mitigation Measures for All Alternatives	2-20
Mt. Hood Land and Resource Management Consistency	2-26
Regulatory Framework	2-29
Comparison of Alternatives	2-30
CHAPTER 3 – Environmental Consequences	3-1
Setting the Stage	3-2
Fire/Fuels Management	3-3
Air Quality/Smoke Management	3-24
Vegetation Resources	3-27
Transportation System	3-47
Soil Productivity	3-59
Watershed Resources	3-73
Aquatic Species and Associated Habitat	3-100
Wildlife Resources	3-122
Botanical Species	3-141
Aquatic Conservation Strategy Objectives	3-152
Invasive Plant Species	3-157

Range Management	3-163
Recreation and Visual Quality.....	3-166
Heritage Resources	3-175
Social Impact Analysis/Environmental Justice	3-184
CHAPTER 4 – Consultation and Coordination.....	4-1
Federal, State and Local Agencies	4-1
Tribes.....	4-2
Others	4-2
List of Preparers.....	4-3
REFERENCES.....	Ref-1
GLOSSARY	Glossary-1
APPENDICES	
Appendix 1 - Collaborative Group Recommendations to USDA Forest Service	
Appendix 2 - Issues Generated through Scoping	

LIST OF FIGURES

Figure 1-1	Vicinity Map
Figure 1-2	Existing Hazardous Fuels Condition in North Fork Mill Creek planning area.
Figure 1-3	Desired Future Condition in North Fork Mill Creek planning area
Figure 1-4	Land Allocation Map for planning area
Figure 1-5	Proposed Action Map
Figure 2-1	Historic Aspen Stand in North Fork Mill Creek planning area
Figure 2-2	Map of Proposed Temporary Roads
Figure 2-3	Alternative 2 Map
Figure 3-1	1937 Picture Mill Creek Look Out
Figure 3-2	1992 picture Mill Creek Look Out
Figure 3-3	Fire Regime Map for Planning Area
Figure 3-4	Condition Class Map for Planning Area
Figure 3-5	Historic Aspen Stand
Figure 3-6	Example of Fuel Model 8
Figure 3-7	Example of Fuel Model 10
Figure 3-8	Dense Multi-storied Stand
Figure 3-9	Downed Wood Fuel Concentrations from Root Disease Mortality
Figure 3-10	Target Canopy Cover
Figure 3-11	Soil Map Units in the North Fork Mill Planning Area
Figure 3-12	Map of Location 7th field Watersheds
Figure 3-13	Water Temperature Monitoring Dites in the North Fork Mill Restoration Project Area
Figure 3-14	Steelhead/Rainbow Trout District in Planning Area
Figure 3-15	Cutthroat Trout Distribution in Planning Area

LIST OF TABLES

Table 1-1	Proposed Vegetation Treatments
Table 2-1	Proposed Vegetation Treatments for Alternative 1
Table 2-2	North Fork Mill Creek Restoration Project Stand Parameters
Table 2-3	Treatment Prescriptions by Unit for Alternative 1
Table 2-4	Road Reconstruction and Maintenance Needs for Identified Haul Routes in Alternative 1
Table 2-5	Proposed Road Closures and Decommissioning
Table 2-6	Proposed Culvert Replacements and Removals
Table 2-7	Proposed Vegetation Treatments for Alternative 2
Table 2-8	Treatment Prescriptions by Unit for Alternative 2
Table 2-9	Haul Route Analysis in Alternative 2
Table 2-10	Comparison of Alternative in Relation to Management Objectives and/or Issues Identified by the Public
Table 3-1	List of Projects Considered in Cumulative Effects Analysis

Table 3-2	Fire Regime in the North Fork Mill Creek Planning Area
Table 3-3	Fire Condition Classes in North Fork Mill Creek Planning Area
Table 3-4	Condition Class by Percentage in the North Fork Mill Creek Planning Area
Table 3-5	Fuel Model 8 Rate of Spread
Table 3-6	Fuel Model 8 Flame Lengths
Table 3-7	Fuel Model 8 Probability of Mortality
Table 3-8	Fuel Model 10 Rate of Spread
Table 3-9	Fuel Model 10 Flame Lengths
Table 3-10	Fuel Model 10 Probability of Mortality
Table 3-11	Stand Size Class Distribution
Table 3-12	Existing Site and Vegetative Condition of Proposed Treatment Stands within North Fork Mill Creek Restoration Project Area
Table 3-13	Summary of Stand Groups for Project Area
Table 3-14	Acres by Harvest Type in North Fork Mill Creek Project Area
Table 3-15	Acres Treated by Stand Group
Table 3-16	National Forest System Roads Within the Project Area.
Table 3-17	Acres of Inventoried Winter Ranger
Table 3-18	Roads within Inventoried Winter Range
Table 3-19	Acres of Deer/Elk Winter Range (B-10 Lands)
Table 3-20	Roads within Deer/Elk Winter Range (B-10 Lands)
Table 3-21	Haul Route Analysis for Alternative 1
Table 3-22	National Forest System Roads Within the Project Area with Proposed Road Closures and Decommissioning
Table 3-23	Roads in Inventoried Winter Range
Table 3-24	Roads in Deer/Elk Winter Range (B10 Lands)
Table 3-25	Haul Route Analysis for Alternative 2
Table 3-26	Comparison of Existing Condition to Alternatives 1 – Proposed Action and Alternative 2
Table 3-27	Comparison in Haul Route Analysis between Alternatives 1 and 2
Table 3-28	Road Comparison between Alternatives 1 and 2
Table 3-29	Soil Types on the Mt Hood National Forest Within the Planning Area
Table 3-30	Summary of Soil Types in the Analysis Area and Associated Management Interpretations Adapted from The Dalles Watershed Soil Survey
Table 3-31	Summary of Forest Plan Soil Standards Guiding the Soils Analysis
Table 3-32	Summary of Stands Monitored with Shovel Probe Transects in the North Fork Mill Planning Area
Table 3-33	Summary Table of Environmental Effects for Alternative 1 and 2
Table 3-34	2004/2006 State of Oregon 303(d) List for Streams in the Planning Area
Table 3-35	7-day Average Maximum Stream Temperatures (in °C)
Table 3-36	Road Densities for 7th Field Sub-watersheds
Table 3-37	Percentage of Riparain Reserves Removed by Timber Hharvest
Table 3-38	Strengths and Weaknesses in Water Quality Analysis
Table 3-39	Primary Shade Zone
Table 3-40	Summary of Sediment Input for Alternative 1-Proposed Action
Table 3-41	Road Density by 7th Field Watersheds for Alternative 1
Table 3-42	Increased Peak Flow for Three Sub-basins (Alternative 1)

Table 3-43	Cumulative Effects Table for Water Quality
Table 3-44	Summary of Sediment Input for Alternative 2
Table 3-45	Road Density by 7th Field Watersheds for Alternative 2
Table 3-46	Increased Peak Flow for Three Sub-basins (Alternative 2)
Table 3-47	Summary of Pertinent Information for Steelhead Trout
Table 3-48	Summary of Habitat Parameters in Streams within the North Fork Mill Creek Planning Area
Table 3-49	Haul Route Road Crossings Over Stream Channels Within the North Fork Mill Creek Planning Area
Table 3-50	Relative Sedimentation Risk of Various Activities Proposed in Alternative 1
Table 3-51	Status of Threatened, Endangered, and Proposed Species; Forest Service Region 6 Sensitive Species in the Project Area
Table 3-52	Effects Determinations for Threatened, Endangered, and Sensitive Species.
Table 3-53	Summary of Effects for Botanical Species
Table 3-54	Individual Indicators for Aquatic Conservation Strategy
Table 3-55	Aquatic Conservation Strategy Objectives
Table 3-56	Noxious Weeds in Planning Area

SUMMARY

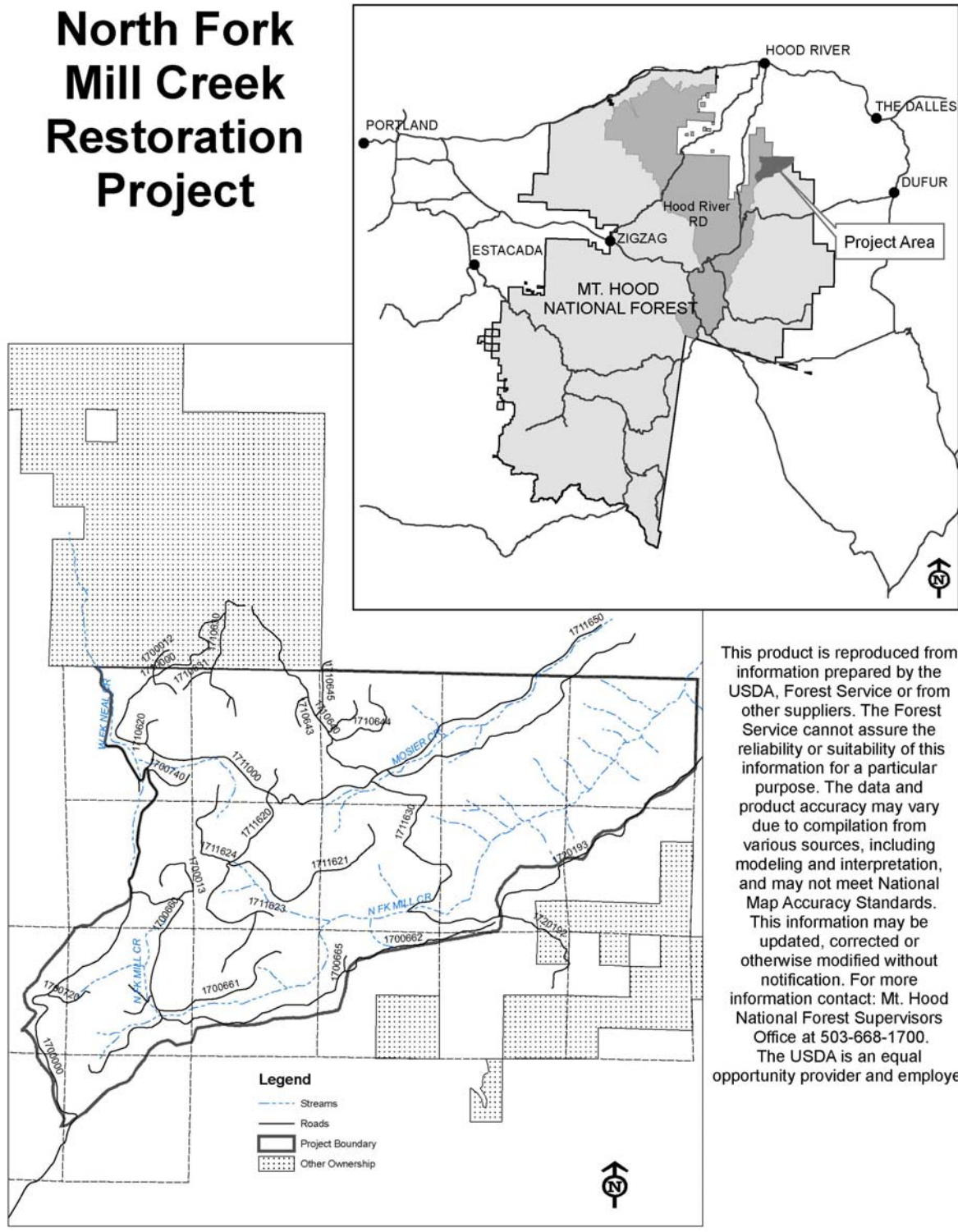
In February 2004, the City of The Dalles requested the Forest Service take action to improve and protect forest health on federally managed public lands within and adjacent to The Dalles Municipal Watershed. Under the authorities of the Healthy Forest Restoration Act (HFRA), the Hood River and Barlow Ranger Districts convened a collaborative working group to assist with developing recommended actions for the South and North Fork Mill Creek planning areas. Barlow Ranger District currently is implementing the first phase of the recommendations for South Fork Mill Creek with The Dalles Watershed Fuelbreak. That 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. The North Fork Mill Creek Restoration Project (Hood River Ranger District) would implement many of the collaborative group recommendations for the North Fork Mill Creek area and would reinforce fuel reduction efforts occurring with The Dalles Watershed Fuel Break.

Stand species composition and tree and brush densities in the North Fork Mill Creek area have been altered through a combination of factors including: fire suppression over the past 100 years, climatic conditions favoring rapid vegetative growth, and the accumulation of dead fuels resulting from insects and disease. Consequently, stands in the area are too dense and crowded. Trees not only have to compete for nutrients, water and sunlight, but are also more susceptible to insects and disease due to their decreased vigor. Dwarf mistletoe-infected trees, trees infected with root rot and other diseases, insect-killed trees, and down fuel are creating a continuous “ladder” of fuel from the ground to the tree crowns thereby increasing the vulnerability of healthy trees to fire. Much of the National Forest System lands in this area have been mapped as Condition Class 3, indicating these lands have missed multiple natural fire events and now contain unnaturally high fuel situations.

The Mill Creek planning area includes the North Fork of Mill Creek watershed and small portions of Mosier and Neal Creek watersheds on National Forest System lands. It is located approximately 5 miles east and southeast of the community of Mt. Hood. The legal land description is T1S-T2S, R10E-R11E, Willamette Meridian. (See attached vicinity map.)

The Hood River Ranger District proposes to treat approximately 2,800 acres. The purpose of the vegetation treatment activities is to reduce hazardous fuels (removal of surface fuels, removal of ladder fuels, and opening of the canopy) and improve forest health conditions (removing root rot pockets, removing diseased trees, thinning overstocked stands). The mechanical fuels reduction treatment methods would consist of tree thinning from below (including the sale of vegetative material), machine piling, hand thinning, pruning by hand, machine mastication, and manual brush removal. Underburning (prescribed fire) would be used in combination with mechanical treatments or with limited non-mechanized (pruning, hand falling) treatments to restore stand health and to create conditions whereby fire could function in a more natural role.

North Fork Mill Creek Restoration Project



This product is reproduced from information prepared by the USDA, Forest Service or from other suppliers. The Forest Service cannot assure the reliability or suitability of this information for a particular purpose. The data and product accuracy may vary due to compilation from various sources, including modeling and interpretation, and may not meet National Map Accuracy Standards. This information may be updated, corrected or otherwise modified without notification. For more information contact: Mt. Hood National Forest Supervisors Office at 503-668-1700. The USDA is an equal opportunity provider and employer.

Figure 1-1: Vicinity Map of North Fork Mill Creek Planning Area

CHAPTER 1 – INTRODUCTION

Document Structure

The Forest Service has prepared this Environmental 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 in wildland-urban interface (WUI) to protect at-risk communities from the risk of wildfire. A WUI is defined as: “an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan” [HR 1904, Section 101.16(A)]. This project lies within an identified WUI, as outlined in the Hood River County Community Wildfire Protection Plan (CWPP) and Wasco County CWPP. Additionally, Wasco County CWPP identified the Mill Creek Watershed, which is adjacent to the project area, as an at-risk community.

This Environmental Assessment discloses the direct, indirect, and cumulative environmental effects that would result from the proposed action, 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, Alternative 2 and No Action Alternatives. This discussion also includes design criteria and mitigation measures that were added as a result of environmental analysis. Finally, this section provides a summary table of the environmental consequences associated with selecting one of the action alternatives versus the No Action Alternative in terms of meeting objectives and addressing the issues.
- *Environmental Consequences:* This section describes the environmental effects of no action as well as the trade-offs and effects of implementing one of the action alternatives. 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 environmental 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 Hood River Ranger District Office in Mt. Hood/Parkdale, Oregon.

Background

The North Fork Mill Creek Restoration Opportunities project is located within the North Fork of Mill Creek watershed and small portions of Mosier and Neal Creek watersheds on Mt. Hood National Forest in Hood River and Wasco Counties. Vegetation includes mixed conifer forests, meadows, and open grassy slopes. Dry grand fir, lodgepole pine and white pine are predominant in the west half of the drainage. The eastern half of the drainage on National Forest System (NFS) lands features open, grass covered slopes and forests of hot, dry ponderosa pine, with Oregon white oak dominating the lower elevations and drier sites. Average annual precipitation ranges from 50 inches on the westside to 30 inches on the eastside, occurring mostly during the winter months. Elevation ranges from 2,200 to 4,200 feet. The area supports a wide variety of human uses, including recreation, wood products, and grazing. The area is important for fisheries, wildlife, plant, and other natural values.

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 Wasco County Community Wildfire Protection Plan (CWPP) identifies 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)

Under the authorities of the Healthy Forest Restoration Act (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. Barlow Ranger District currently is implementing the first phase of the recommendations for South Fork Mill Creek with The Dalles Watershed Fuelbreak. That 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.

The North Fork Mill Creek Restoration Opportunities Project (Hood River Ranger District) would implement many of the collaborative group recommendations for the North Fork Mill Creek area and would reinforce fuel reduction efforts occurring with The Dalles Watershed Fuel Break. The Hood River County CWPP identified this as a project needed to reduce hazardous fuels within the county: “The project will be a collaborative approach to fuels reduction and restoration in the North Fork Mill, Mosier, and West Fork Neal watersheds. It may include fuels reduction (thinning, brush removal, pruning), road closures, stream and wildlife restoration, and/or prescribed burning” (Hood River County, CWPP, page 120). The planning area is within the wildland-urban interface (WUI) as identified in the Hood River County CWPP (see Figure 28, page 87).

Collaborative participants met from November 2004 to March 2006. 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, Oregon Department of Environmental Quality Oregon Department of Parks and Recreation, US Fish and Wildlife Service), watershed councils and local agencies (Wasco County Soil and Water Conservation District, City of The Dalles), environmental groups (Bark and Oregon Wild), private citizens, neighboring landowners, timber industry, mountain bike groups and other recreational enthusiasts such as the Backcountry Horsemen of Oregon, Columbia Gorge Power Sledders and Columbia Gorge Off-Road Association. 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 focused on wildlife habitat, meadows and aspen stands, fish habitat, road density, recreational trails, and grazing management.

After receiving the recommendations, District personnel began the interdisciplinary process of developing a detailed fuels reduction and restoration proposal that would meet the objectives for the area and respond to many of the recommendations of the collaborative group.

Purpose and Need for Action

The purpose of the project is to conduct restoration activities within the North Fork Mill Creek planning area to effectively reduce fuel loadings, improve the health and vigor of forested stands, restore wildlife habitat, improve conditions for aquatic resources, and to integrate the public's need for access to the area with the needs of aquatic and wildlife resources. Specific management objectives and underlying need of the project are to:

- Reduce risk of loss of healthy large diameter/remnant ponderosa pine, Douglas-fir, and western larch trees, and develop stands more resilient to insects, disease and fire;
- Restore stand health to improve resiliency to insects and disease;
- Maintain the health and vigor of established Douglas-fir understories within stands previously partially harvested;
- Decrease the rate of spread of laminated root rot and dwarf mistletoe;
- Restore wildlife habitat, including the unique aspen stands, within the planning area; and,
- Restore wildlife security and aquatic integrity within the planning area while integrating the public's need for access.

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.

In the planning area, insect and disease are major contributors to increased fuel loadings and poor forest health. The absence of fire and partial cutting in the early 1900s in the project area has contributed to Douglas-fir dominated, dense, and often multi-canopied stand conditions, which are particularly favorable to dwarf mistletoe. Dwarf mistletoe causes decreased height and diameter growth, reduction in seed and cone crops, and direct tree mortality or predisposition to other

pathogens or insects. In addition, most of the stands in the watershed have some level of root disease present, found most often in the Mill Creek drainage as laminated root rot (*Phellinus weirri*). Again, in the absence of fire, root decay has become very active, probably outside its range of natural variability in these stands. Fire does not eliminate root disease, but there is evidence that it slows it down, especially when its host is consumed. When there is an abundance of a susceptible species in a stand, root disease centers continue to grow.

Within the area, 43 percent of the National Forest System lands have been mapped as Condition Class 3, indicating these lands have missed multiple natural fire events and now contain unnaturally high fuel situations. The planning area also includes lands within Condition Class 2 (9 percent), 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. Where appropriate, these areas need high levels of restoration treatments to restore the historical fire regime. The proposed vegetation management treatments focus on these lands.

Vegetation would normally consist of well-spaced fire tolerant species such as ponderosa pine, western larch, white oak, and dry-climate Douglas-fir, and frequent fire return intervals of low and moderate intensity would have been expected. The shade-tolerant, thin-barked species such as grand fir, lodgepole pine, and western hemlock would have been thinned out regularly by fire. Historical fire return intervals in the project area are 35 to 200 years. Low intensity, high frequency fires do not occur with higher moisture amounts and greater fuel loadings.

Stand structure changes from lack of fire include a much higher stocking level of fire-tolerant species, an increase of shade-tolerant species in the intermediate layer, an increased shrub and reproduction component, and fewer openings associated with the natural stands. This change results in stands that are more likely to experience a higher intensity fire, with stand-replacing consequences. Currently, the project area includes a variety of unhealthy, mature stands that have a higher risk of damage from catastrophic fire. For example, stands previously dominated by ponderosa pine and western larch are losing the pine component from stress from competing with water using grand fir. Western larch requires full sunlight and a mineral soil seedbed to establish, conditions historically provided by periodic wildfire. Diseased trees, insect killed trees, and down fuel are creating continuous fuel ladders from the ground to the tree crowns (See Figure 1-2).

Management Direction

The North Fork Mill Creek Restoration Opportunities project is proposed at this time to respond to goals and objectives of the National Fire Plan (2000) and the Mt. Hood Land and Resource Management Plan, as amended (USDA Forest Service, 1990a). This Environmental Assessment (EA) process 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.

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 (<http://www.forestsandrangelands.gov/NFP/overview.shtml>).

This EA is tiered to the Mt. Hood National Forest Land and Resource Management Plan Final Environmental Impact Statement (USDA Forest Service, 1990b) and Record of Decision (USDA Forest Service, 1990c), and incorporates by reference the accompanying Forest Plan (USDA Forest Service, 1990a). 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.

Additional guidance for the project area is provided by the Mill Creek Watershed Analysis (USDA Forest Service, 2000) and the Surveyor's Ridge Late-Successional Reserve Assessment (USDA 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.

Desired Future Condition/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 Figure 1-4). The two major Forest Plan land allocations in the planning area are Deer and Elk Winter Range (B10) and Timber Emphasis (C1), plus a small area of Scenic Viewshed (B2). Additionally, the planning area includes small areas of Special Old Growth (A7) and Research Natural Area (A3), which are Administratively Withdrawn under the Northwest Forest Plan, and Special Emphasis Watershed (B6). No treatments would occur in these land use allocations.

The goal for deer and elk winter range is to provide high quality deer and elk habitat for use during most winters; and to provide for stable population of mule deer and Rocky Mountain elk on the eastside. A secondary goal is to maintain a healthy forest condition through a variety of timber management practices (Forest Plan, Four-272). The goal for timber emphasis lands is provide lumber, wood fiber, and other forest products on a fully regulated basis, based on the capability and suitability of the land. A secondary goal is to enhance other resource uses and values that are compatible with timber production (Forest Plan, Four-289). Lastly, the goals of scenic viewshed is to provide attractive, visually appealing forest scenery with a wide variety of natural appearing landscape features; and to utilize vegetation management activities to increase and maintain a long-term desired landscape character (Forest Plan, Four-218). Only a small portion of one treatment unit is located with a scenic viewshed for this project and the visual quality objective would be retained.

The Surveyors Ridge Late Successional Reserve (LSR), as designated by the Northwest Forest Plan, runs along the western boundary of the project area and does not fall within any treatment units. The Dalles Watershed is located on the southeastern boundary of the project area. Private lands border the project area to the north.



Figure 1-2: Existing Hazardous Fuels Condition in North Fork Mill Creek planning area.



Figure 1-3: Desired future condition in the North Fork Mill Creek planning area. Photo A is the target canopy cover. Photo B is a stand that has been commercially thinned and underburned in the mid-1990s.

North Fork Mill Creek Mt. Hood Forest Plan Management Areas

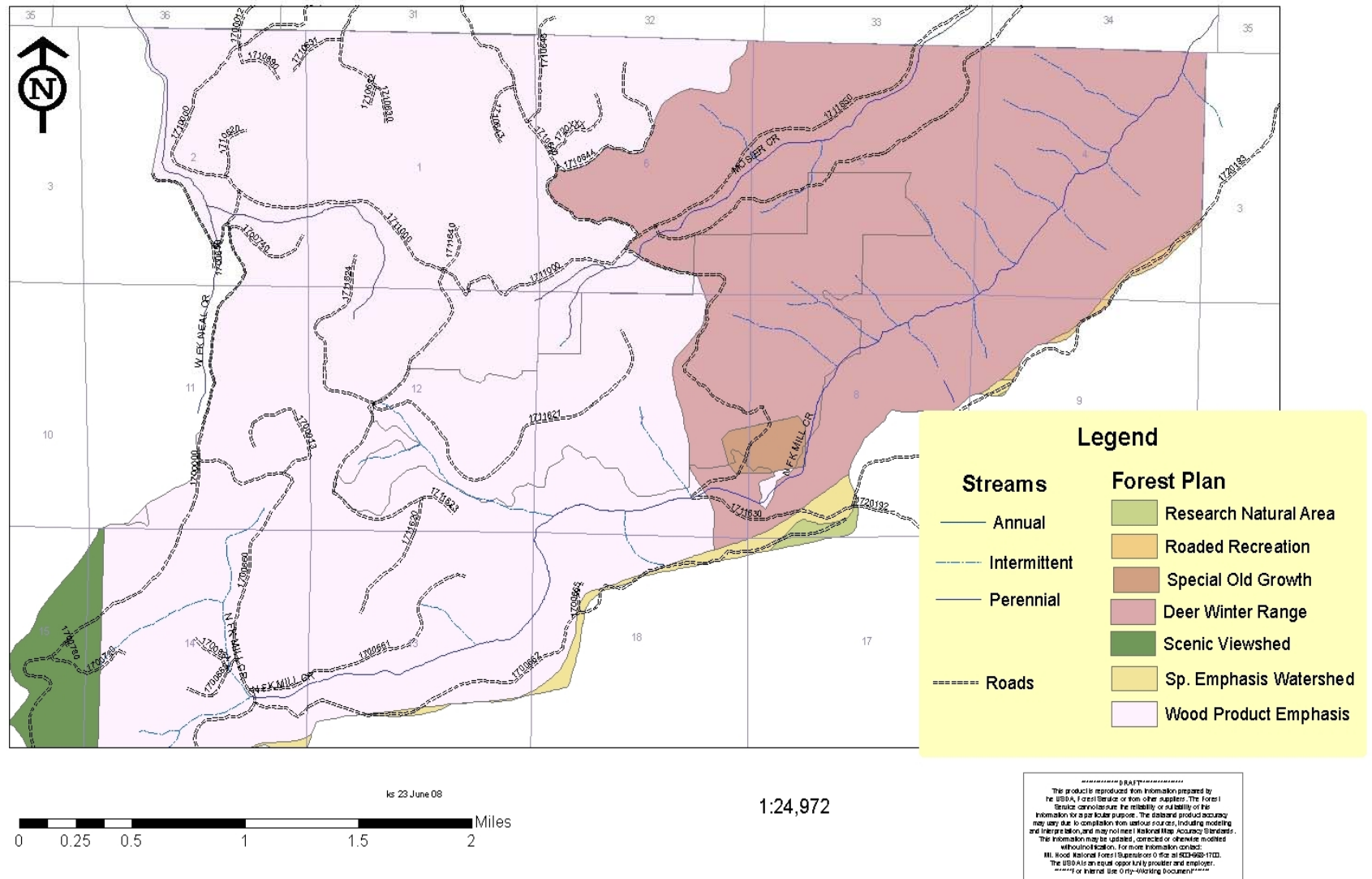


Figure 1-4: Land Use Allocation Map for planning area

Proposed Action

Vegetation Treatments

The Hood River Ranger District proposes to treat approximately 2,800 acres. The purpose of all the activities is to reduce hazardous fuels (removal of surface fuels, removal of ladder fuels, and opening of the canopy) and improve forest health conditions (removing root rot pockets, removing diseased trees, thinning overstocked stands). The mechanical fuels reduction treatment methods would consist of tree thinning from below (including the sale of vegetative material), machine piling, hand thinning, pruning by hand, machine mastication, and manual brush removal. Underburning (prescribed fire) would be used in combination with mechanical treatments or with limited non-mechanized (pruning, hand falling) treatments to restore stand health and to create conditions whereby fire could function in a more natural role. The proposed treatments for the planning area are shown in the table below.

Table 1-1: Proposed vegetation treatments

Treatment	Acres
Restoration Thin	2131
Sapling Thin	26
Aspen Cottonwood Enhancement	45
Underburn	684
Total Acres	2885

All proposed treatment areas are shown on the Proposed Action map (Figure 1-5), and include riparian buffers and buffers around known Northern Spotted Owl nesting sites. Some stands may undergo future prescribed underburning after mechanical thinning. The Proposed Action includes snowplowing to allow for hauling under winter conditions, if necessary and if approved by the District Ranger. Vegetation treatment over most of the area would involve the use of available roads and skid trails existing from past activities (approximately 68 percent of proposed treatment areas were entered in the past 30 to 35 years). Approximately 1-mile of temporary roads would be constructed for removal of vegetation in some stands; these roads would be decommissioned at the end of the project.

Other Restoration Activities

In addition, the Proposed Action for this project area includes restoration and projects that would affect public access (road closures, road decommissioning, culvert replacement/removal, and trail improvement/construction). The road proposal includes implementing seasonal closures on approximately 7.6 miles of road, year-round closures on approximately 7.8 miles of road, and obliterating approximately 8.8 miles of road. The culvert proposal includes removing/replacing 12 culverts on and off-Forest on roads that are under Forest Service jurisdiction. These road treatment proposals would serve to improve wildlife habitat, reduce the risk of spread of noxious weeds, improve water quality, and reduce the costs of road maintenance in the area.

Lastly, the Proposed Action includes designating and improving the non-motorized trail system within the planning area, as shown in the Proposed Action map. Approximately 6.0 miles of horse/hiking trails and approximately 7.5 miles of horse/hiking/biking trails are being proposed for improvement and/or construction.

North Fork Mill Creek Proposed Action

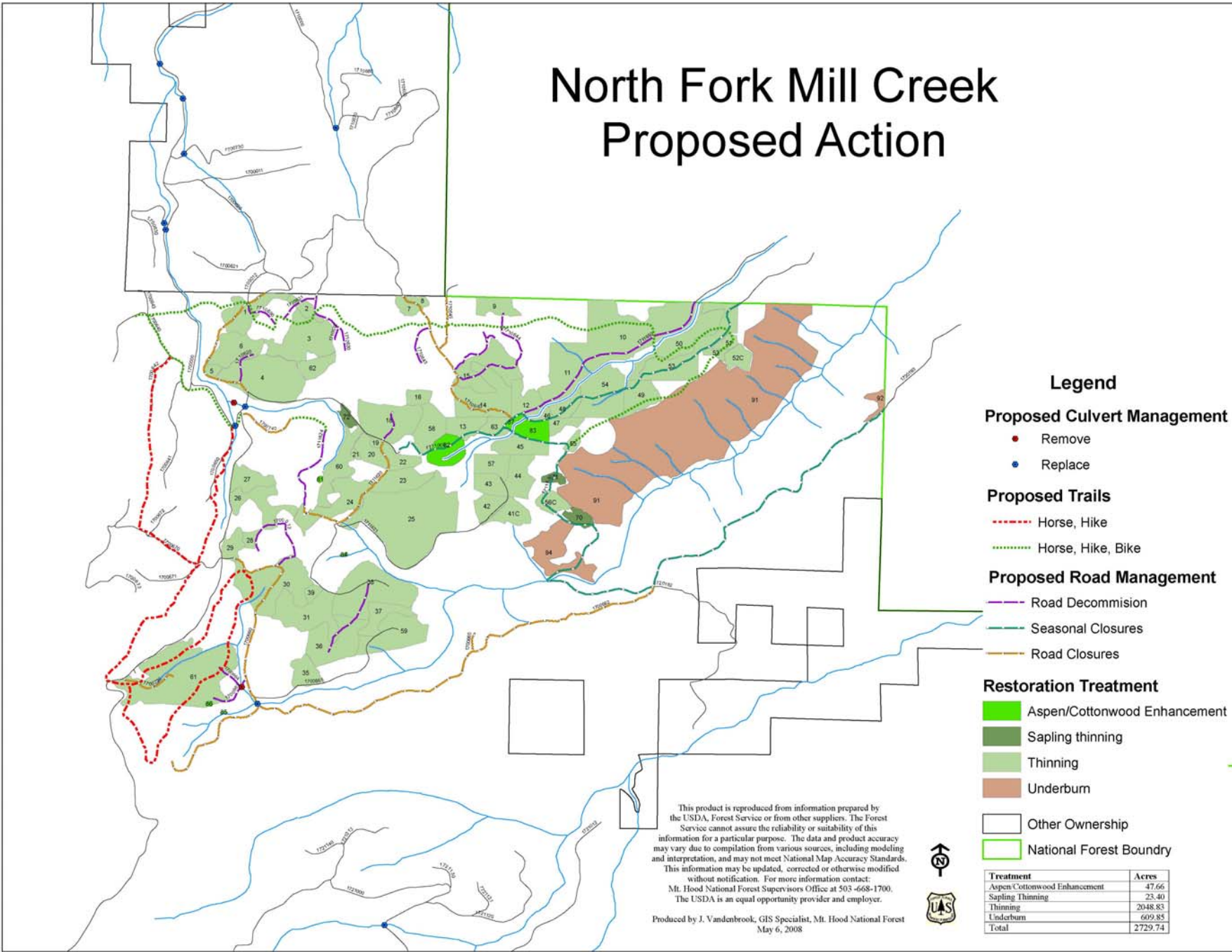


Figure 1-5: Proposed Action Map

Decision Framework

The Forest Supervisor for the Mt. Hood National Forest will make the following decisions based on this interdisciplinary analysis:

- Whether or not to reduce fuels in the North Fork Mill Creek Planning Area by implementing the Proposed Action or Alternative 2;
- Whether or not to decommission or implement seasonal or year-round closures on Forest Service system roads within the planning;
- Whether or not to replace/remove 12 culverts on and off-Forest on roads that are under Forest Service jurisdiction;
- Whether or not to designate and improve the non-motorized trail system within the planning area;
- What design criteria and mitigation measures are needed to implement each of the restoration opportunities within the planning area.

Public Involvement

Collaboration

This project lies within an identified WUI, as outlined in the Hood River County Community Wildfire Protection Plan (CWPP) and Wasco County CWPP. Additionally, Wasco County CWPP identified the Mill Creek Watershed, which is adjacent to the project area, as an at-risk community. Both CWPP were prepared in a collaborative effort by individuals and agencies within each respective county.

In addition, the Hood River and Barlow Ranger Districts initiated an additional collaborative group made up of individuals and agencies to identify specific projects within the North Fork and South Fork Mill Creek planning areas.

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

- On October 18, 2004, the District mailed out an invitation for a collaboration meeting asking people to attend who were interested in helping to design fuels reduction and restoration projects in North Fork and South Fork Mill Creek watersheds.
 - 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 issued a press release announcing the meeting.
- 15 people attended the first collaboration meeting held at the Discovery Center in The Dalles, Oregon on November 19, 2004 including participants from federal and state agencies (Forest Service, U.S. Fish and Wildlife Service, Oregon Department of Forestry, Oregon Department of Fish & Wildlife, Oregon Department of Environmental Quality), watershed councils and local agencies (Wasco County Soil and Water, The City of The Dalles),

environmental groups (Bark and Oregon Wild), private citizens, neighboring landowners, mountain bike groups and recreational enthusiasts (Backcountry Horsemen of Oregon, Columbia Gorge Power Sledders, Columbia Gorge Off-Road Association).

- Collaborative participants met from November 2004 to August of 2005 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 in the North Fork Mill Creek planning area. The specific restoration recommendations focused on wildlife habitat, meadows and aspen stands, fish habitat, road density, recreational trails, and grazing management. Appendix 1 contains the final collaborative group recommendations for this project.
- Several other individuals who were unable to attend the collaboration meetings contacted the Forest Service and asked to be included on a mailing list.
- On September 12, 2007, a description and map of the more detailed restoration opportunities in North Fork Mill Creek planning area was presented at a collaborative group meeting at Hood River Library. Six members of the collaborative group attended the meeting. Most present at the meeting were supportive of the more comprehensive approach, represented by Alternative 1. Some expressed concern about entering naturally appearing stands for vegetative treatment, represented by Alternative 2.
 - In follow-up to the meeting, the Hood River District Ranger distributed a survey to the collaborative group via email to determine the support for the various alternatives/options. Approximately nine people responded, including members of the collaborative group not present at the meeting. The views expressed paralleled the collaborative group meeting.
- On February 16, 2008, a stand objectives table detailing the proposed treatments was distributed via email to provide the collaborative group with a final opportunity to provide input into the Proposed Action before the Forest Service conducted public scoping. Six people responded and their comments were incorporated into the stand objectives.

Scoping/Public Involvement

The hazardous fuels reduction proposal was listed in the Mt. Hood National Forest quarterly planning newsletter (Schedule of Proposed Actions [SOPA]). No comments were received through that effort. In March 2008, a letter providing information and seeking public comment was mailed to 135 individuals and groups. This included federal and state agencies, the Confederated Tribes of Warm Springs, municipal offices, businesses, interest groups, landowners near the watershed and individuals. Comments were received from representatives of Oregon Wild (formerly ONRC), SDS Lumber, and three individuals.

As required by HFRA, a public meeting was held on March 26, 2007 at the Hood River Ranger

Station at Mt. Hood/Parkdale, Oregon. The meeting was announced in *The Oregonian* as part of a legal notice of the public meeting. No individuals attended the meeting. A summary of the public comments received during the scoping period are include in Appendix 2.

Issues

Using the comments from the collaborative effort, the general public and other agencies, the interdisciplinary team identified a list of issues to address. Issues identified during scoping were used to develop alternatives to the proposed action and to refine the proposed action presented in Chapter 2. The issue statements below are taken directly from the public scoping letters received.

- **Canopy Fuels Reduction**: Removing canopy fuels can reduce crown-to-crown fire spread, but the science clearly shows that removing canopy cover can also increase fire hazard by increasing solar insolation which causes fuels to warm and dry and increases wind speeds. Removing shade trees also frees site resources (light, water, nutrients) that can stimulate the growth of future ladder fuels and increase the cost of maintaining fuel treatments.

Discussion of this issue can be found in Chapter 3 – Fire/Fuels Management.

- **Large Tree Retention**: The Mill Creek watershed has a severe shortage of large diameter old-growth trees. The diameter classes in the current proposal include a class of 24 to 30 inches, and mentions that in some instances there are too many of these trees. Therefore we recommend not thinning trees in this diameter class. The diameter class should be modified to be 21 to 30 inches to reflect the signs of forest and ecosystem complexity that are developing when trees reach the 21 inches diameter.

This issue was used to refine Alternative 2 which does not treat natural stands. Discussion of this issue can be found in Chapter 3 – Vegetation Resources.

- **Forest Health**: The current plan appears to prescribe 1-2 acre clear cuts to deal with root rot pockets. This treatment will result in significant negative ecosystem and hydrologic impacts. To mitigate these impacts in the densest pockets of root rot you should still "leave the best of what's left" of the trees in the stand, preferably a minimum of 10 of the best remaining trees per acre in these situations.

Discussion of this issue can be found in Chapter 3 – Vegetation Resources.

- **Snags and Down Logs**: There is a shortage of large down wood and snags across the landscape due to extensive logging over the past century. All large snags and down wood should be left in place and/or created to at least meet forest plan standards.

Discussion of this issue can be found in Chapter 3 – Wildlife Resources.

- **Road Density**: The current road density in this area is significantly higher than it should be even under the forest plan guidelines. The high road density disturbs wildlife habitat, creates erosion, degrades water quality and allows for increased fire hazard. The current road

obliteration plan is a good step in the right direction. We encourage the USFS to include more of this type of management, as there are still significantly more roads that need to be obliterated to restore the aquatic integrity of this watershed.

Discussion of this issue can be found in Chapter 3 – Transportation Systems and Chapter 3 – Wildlife Resources.

- **Temporary Roads:** While we feel that temporary road construction is more appropriate than permanent road construction, temporary roads still channelize water, cause erosion, and conduct invasive weeds. New roads should only be considered as a last resort for access to treatment areas.

As required by the design criteria and mitigation measures, all temporary roads, skid trails, and landings would be rehabilitated after project activities are completed in each unit. Analysis of temporary roads can be found in the effects analysis section for each resource area.