Decision Notice

& Finding of No Significant Impact

North Fork Mill Creek Restoration Opportunities

USDA Forest Service
Hood River Ranger District, Mt. Hood National Forest
Hood River and Wasco Counties, Oregon
Legal Land Description: T1S, R10E (Hood River County) and T1S, R11E (Wasco County)

Decision and Reasons for the Decision

Background

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) will implement many of the collaborative group recommendations for the North Fork Mill Creek area and will 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 CWPP Figure 28, page 87).

After receiving the recommendations from the collaborative group, 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.

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.

Condition classes are a function of the degree of departure from historical fire regimes resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, and canopy closure. One or more of the following activities may have caused this departure: fire exclusion, timber harvesting, grazing, introduction and establishment of invasive plant

species, insects or disease (introduced or native), or other past management activities. 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-intolerant 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 become established, 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.

Desired Future Condition/Land Allocations

The desired future condition of the project is to develop an uneven-aged stand with canopy closure that will 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 will enable meeting the overall goals of the land allocations within the project area (see Figure 1).

Several land allocations as designated by the Forest Plan and Northwest Forest Plan are found within the project area (see EA Chapter 1, 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 will occur in these land use allocations.

Existing Condition

Desired Future Condition

Figure 1: Existing condition and desired future condition in the North Fork Mill Creek planning area. The top two photos show the existing fuel loadings for Fuel Model 10. The bottom two photos show the desired future condition. The photo on the left is the target canopy cover, and the photo on the right is a stand that has been commercially thinned and underburned in the mid-1990s.

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 populations of mule deer and Rocky Mountain elk on the eastside of Mt. Hood. 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 for a 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 will be retained.

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. Mill Creek contains Middle Columbia River Evolutionary Significant Unit steelhead trout (*Oncorhynchus mykiss*), listed as a threatened species.

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.

Decision

I have decided to implement the Proposed Action (Alternative 1), including the design criteria/mitigation measures (see Appendix 1), as described in the North Fork Mill Creek Restoration Opportunities Environmental Assessment with the following changes.

- All Douglas-fir trees 24-inches and greater in diameter and all white fir trees 29-inches and greater in diameter will remain in all root rot pockets (group selections) located throughout the planning area, regardless of their fuels risk or dwarf mistletoe rating. Larger trees may be girdled if they present a fuels risk to adjacent desirable species (ponderosa pine, western white pine, larch, and other healthy fire-resistant species) and measures, such as pruning of ladder fuel, would not adequately address the risk. This approach will be similar to the one taken throughout the project area.
- Trees greater than 24-inches in diameter may be removed to create a cable corridor to facilitate timber removal in cable units. Removing large trees will be avoided whenever possible. The most effective and safest cable corridor will be designated.
- Approximately 0.1 miles of the 1700-662 Road that is proposed for closure overlaps with the proposed action for the Off-Highway Vehicle (OHV) Travel Management Plan Environmental Impact Statement (EIS). If the OHV EIS proposed action or an alternative including this road segment is selected, the road would be closed to licensed vehicle traffic and open as a trail for OHV use. This portion of the 1700-662 would be converted to a motorized trail.

- Approximately 0.15 miles of the 1700-013 Road that is proposed for decommissioning overlaps with the proposed action for the OHV EIS. If the OHV EIS proposed action or an alternative including this road segment is selected, this section of the 1700-013 would not be decommissioned.

The Environmental Assessment was prepared under the authorities contained in the Healthy Forests Restoration Act (HFRA, 2003). This project is designed to reduce hazardous fuels in the wildland-urban interface (WUI) around the City of The Dalles Watershed on the Hood River Ranger District of Mt. Hood National Forest. 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, R10E (Hood River County) and T1S, R11E (Wasco County), Willamette Meridian.

The Proposed Action (Alternative 1) includes vegetation treatment as well as other restoration projects. The project will 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 will 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) will 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: Proposed vegetation treatments

Treatment	Acres
Restoration Thin	1896
Sapling Thin	153
Aspen Cottonwood Enhancement	61
Underburn	610
Total Acres	2720

All proposed treatment areas are shown on the Proposed Action map (EA Chapter 1, 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 vegetation treatments will follow the stand treatment parameters in Appendix 1. 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 will 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 one mile of temporary roads may be constructed for removal of vegetation in some stands; these roads will 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 will

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 will 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.

Change from EA

The vegetation treatments are currently being laid out on-the-ground. During layout, several treatments were changed to accommodate differences between the assumptions made during analysis and conditions on-the-ground. All of the changes are within the effects analysis provided within the EA documents because no additional acres or tractor, ground-based logging was added to the project. Table 2 replace the treatments found in EA Chapter 2, Table 2-3.

Table 2: Treatment Prescriptions for North Fork Mill Creek Vegetation Treatments

Unit	Treatment	Under-burn	Existing Canopy Cover	Target Canopy Cover	Silviculture Remarks	Proposed Acres	Implement Acres	Change
1	Thinning/GS	No	55	15	Heavy dwarf mistletoe in overstory and understory.	35	35	Include group selection patches for species diversity
2	Thinning	No	55	15	Heavy dwarf mistletoe in overstory and understory.	11	15	Acreage ground-truthed
3	Thinning/GS	No	50	15	Heavy dwarf mistletoe in overstory and understory.	60	60	Include group selection patches for species diversity
4	Sapling Thinning/ GS	No	60	20		85	85	Sapling thinning with group selection
5	Sapling Thinning/ GS	No	50	30	Thin mid-story. Dwarf mistletoe and root rot pockets (group selection patches).	5	5	Sapling thinning with group selection
6	Sapling Thinning/ GS	No	60	40	Dwarf mistletoe.	36	35	Sapling thinning with group selection
7	Thinning	No	70	50		8	8	
8	Thinning	No	60	40		5	5	
9	Thinning	No	15	15		19	19	
10	Thinning/GS	Yes	60	40	Root rot pockets (group selection patches).	136	136	
11	Thinning/GS	Yes	60	40		47	47	Include group selection
12	Thinning/GS	Yes	65	45		24	24	Include group selection
13	Thinning/GS	No	60	40	Young second growth stand.	20	20	Defer or patch cut only
14	Thinning/GS	Yes	55	40	Second growth stand.	58	58	Patch cut dwarf mistletoe
15	Thinning	Maybe	60	40	Second growth stand. Leave lodgepole pine.	51	51	
16	Thinning	Yes	50	40	Old selection cut.	10	10	
17	Thinning/GS	Yes	50	25	Old selection cut. Severe dwarf mistletoe.	15	15	Include group selection

Unit	Treatment	Under-burn	Existing Canopy Cover	Target Canopy Cover	Silviculture Remarks	Proposed Acres	Implement Acres	Change
18	Thinning/GS	Yes	50	40	Severe root disease.	57	57	Include group selection
19	Thinning	No	60	40		3	3	
20	Thinning	No	60	40	Old selection cut.	17	17	
21	Thinning	No	60	40	Old selection cut.	2	2	
22	Thinning	No	50	30	Severe dwarf mistletoe.	18	17	
23	Thinning	No	50	30	Severe dwarf mistletoe.	30	30	
24	Thinning	Yes	60	40	Second growth stand.	46	41	Acreage ground-truthed
25	Thinning/GS	Maybe	75	30	Thinned 1975. Severe dwarf mistletoe. Root rot pockets (group selection patches).	167	167	
26	Thinning/GS	Yes	70	40	Root rot pockets (group selection patches).	35	31	Acreage ground-truthed
27	Thinning	Maybe	80	40		22	22	
28	Thinning/GS	Yes	65	40	Root rot pockets (group selection patches).	6	6	
29	Thinning	Yes	60	40	Dwarf mistletoe.	14	17	Acreage ground-truthed
30	Thinning	No	60	50		81	14	Redelineated by stand type.
31	Thinning/GS	No	70	40	Root rot pockets (group selection patches).	54	31	Redelineated by stand type.
35	Thinning/GS	No	70	40	Root rot pockets (group selection patches).	23	23	
35C	Thinning	No	70	40	Cable	0	3	Part of original unit 35
36	Thinning/GS	No	65	40	Thinned 1976. Severe dwarf mistletoe.	54	28	Redelineated by stand type. Include group selection
36C	Thinning	No	65	40	Cable	0	7	Part of original unit 36
37	Thinning/GS	No	75	50	Dwarf mistletoe and root rot pockets (group selection patches).	28	20	Acreage ground-truthed

Unit	Treatment	Under-burn	Existing Canopy Cover	Target Canopy Cover	Silviculture Remarks	Proposed Acres	Implement Acres	Change
38	Thinning/GS	No	70	40	Root rot pockets (group selection patches).	84	65	Acreage ground-truthed
39	Thinning/GS	No	70	50	Dwarf mistletoe and root rot pockets (group selection patches).	6	16	Acreage ground-truthed
40	Thinning	No	70	50	Dwarf mistletoe.	28	24	Acreage ground-truthed
41C	Thinning/GS	No	60	40	Dwarf mistletoe and root rot pockets (group selection patches).	20	20	
42	Thinning/GS	No	75	50	Dwarf mistletoe and root rot pockets (group selection patches).	17	17	
43	Thinning/GS	No	50	30	Heavy dwarf mistletoe and root rot pockets (group selection patches).	18	18	
44	Thinning	No	70	40		28	28	
45	Thinning/GS	Yes	60	30	Root rot pockets (group selection patches).	25	25	
46	Thinning/GS	Yes	60	30	Root rot pockets (group selection patches).	4	4	
47	Thinning/GS	No	50	25	Root rot pockets (group selection patches). Second growth.	11	11	
48	Thinning/GS	Maybe	55	30	Root rot pockets (group selection patches).	14	14	
49	Thinning	Maybe	60	60		28	28	
50	Thinning	Maybe	50	40		46	46	
51	Thinning	Maybe	50	40		8	7	
52	Thinning	Yes	30	30		5	5	
52C	Thinning	Yes	40	30		15	15	

Unit	Treatment	Under-burn	Existing Canopy Cover	Target Canopy Cover	Silviculture Remarks	Proposed Acres	Implement Acres	Change
53	Thinning/GS	Maybe	70	60	Root rot pockets (group selection patches).	67	67	
54	Thinning/GS	Maybe	60	30	Root rot pockets (group selection patches).	56	56	
55	Thinning/GS	Yes	70	40	Root rot pockets (group selection patches).	6	6	
56C	Thinning	Yes	55	40		15	15	
57	Thinning/GS	No	50	30	Dwarf mistletoe and root rot pockets (group selection patches).	21	21	
58	Thinning/GS	No	50	30	Dwarf mistletoe and root rot pockets (group selection patches).	31	31	
59	Thinning/GS	No	70	40	Dwarf mistletoe and root rot pockets (group selection patches).	57	54	
59C	Thinning	No	70	30		11	0	Dropped – not feasible
60	Thinning/GS	No	50	30	Root rot pockets (group selection patches).	36	35	
61	Thinning/GS	No	50	40	Root rot pockets (group selection patches).	151	52	Divided into Units 61 and 64.
62	Thinning	No	70	40		16	16	
63	Thinning/GS	No	50	30	Root rot pockets (group selection patches).	13	13	Defer or patch cut only
64	Thinning/GS	Maybe	50	40	Root rot pockets (group selection patches)	0	99	Part of unit 61.
65	Thinning					0	36	Part of original unit 30
66	Thinning/GS					0	10	Part of original unit 31
67	Thinning/GS					0	3	Part of original unit 36
70	Sapling thinning	Yes	75	45		11	11	
71	Sapling thinning	Yes	40	30		7	6	

Unit	Treatment	Under-burn	Existing Canopy Cover	Target Canopy Cover	Silviculture Remarks	Proposed Acres	Implement Acres	Change
72	Sapling thinning	Yes	25	25		7	7	
73	Sapling thinning					0	4	Part of original Unit 36. Redelineated by stand type.
81	Aspen/Cottonwood Enhancement	Yes	30	20		1	2	Acreage increased in ground-truthing.
82	Aspen/Cottonwood Enhancement	Yes	50	30		24	24	
83	Aspen/Cottonwood Enhancement	Yes	40	30		17	17	More conifer than Aspen Cottonwood
84	Aspen/Cottonwood Enhancement	Yes	60	40		1	11	Acreage increased in ground-truthing.
85	Aspen/Cottonwood Enhancement	Yes	50	40		1	2	Acreage increased in ground-truthing.
86	Aspen/Cottonwood Enhancement	Yes	30	20		1	2	Acreage increased in ground-truthing.
87	Aspen/Cottonwood Enhancement	Yes	35	25		3	3	
91	Underburn	Yes	50	40		549	549	
92	Underburn	Yes	5	5		8	8	
94	Underburn	Yes	5	5		53	53	
TOTAL ACREAGE						**2802**	**2720**	

Note: Further changes in acreage are expected as treatment units are implemented on-the-ground. These changes are relatively minor and shall remain within the effects analyzed. Acreage has so far decreased by 82 acres.

Mt. Hood Land and Resource Management Plan Consistency

Standards and guidelines in the Mt. Hood Forest Plan were not written to address hazardous fuels reduction. When the Mt. Hood Forest Plan was written, it emphasized traditional timber sales, rather than fuels reduction projects. The following standards will not be met with this decision.

- Organic Matter (FW-033): At least 15 tons per acre of dead and down woody material in eastside vegetation communities…should be maintained and evenly distributed across managed sites.

  It is likely organic matter tonnage will be reduced to levels below Forest Plan Standard FW-033, especially in the higher fire frequency areas and on the south and west slopes. Since the overarching goal of the hazardous fuel reduction project is to reduce organic matter available to burn, it is a trade-off to meet the purpose and need. Fine organic matter levels should trend upward as the forest floor in higher fire frequency areas increase in shrubs, forbs, and grasses. Also, it is likely localized acreage will be lower than Forest Plan standards for organic matter, which is an intention of the proposed action for a hazardous fuel reduction project. When this occurs, it is not expected to be a substantial impact to nutrient cycling because these are not clearcuts followed by intense burning and extreme loss of current and future organic matter. Many of the soils impacted will retain substantial organic matter reserves in the mineral topsoil due the way in which they have developed. See EA Chapter 3, Soil Productivity for more details.

- Silvicultural Systems (FW-333): Uneven-age management should not be applied on slopes where cable logging systems will be necessary (30+% slopes).

- Silvicultural Systems (FW-337). Uneven-aged management should not be applied where stands are moderately to heavily infected with dwarf mistletoe.

  Silvicultural systems refer to whether even-aged or uneven-aged management should be applied. Even-aged systems are regeneration harvests, including clearcutting, seed tree, and shelterwood cuts. The Forest Plan recommends an even-aged system on slopes over 30 percent because the residual trees in an uneven aged harvest system are often damaged with cable logging systems. Even-aged management is also the preferred approach when treating stands with dwarf mistletoe because of the spread of the parasitic plants to healthy trees under the canopy of infected trees. These Standards (FW-333 and FW-337) are not being met because the silvicultural prescriptions specify appropriate mitigation measures in management areas where uneven-aged management is being considered to fulfill resource objectives other than timber production (Forest Plan, Four-88). The objective of this project is fuels reduction while maintaining structure for aesthetics, wildlife, nutrient cycling, future stand composition and health. Mitigation measures create patch openings, girdle mistletoe-infected trees, underburn, and use directional falling techniques to limit residual tree damage on cable logged slopes which are part of the design of the proposed action. The expected condition after harvest is reduced mistletoe infestation creating a more open forest with a greater grass, forb, and shrub undergrowth. See EA Chapter 3, Vegetation Resources section for more details.

Exceptions to these standards are required to meet the purpose and need of effective fuel reduction. These exceptions were identified during the interdisciplinary planning analysis and the IDT process concluded that these exceptions were within the purpose and need for action. Exceptions are allowed under the Forest Plan, if they are identified during the interdisciplinary process. All other standards and guidelines are expected to be met with this proposal.

Rationale for the Decision

When compared to the No Action Alternative, the selected alternative will lessen the likelihood of a crown fire running into or out of private lands as well as the municipal watershed for the City of The Dalles by treating hazardous fuels and reducing the risk of a catastrophic wildfire. Also, the selected alternative will effectively improve the health and vigor of forested stand and reduce the potential for tree mortality from insects and disease by thinning in overstocked stands. Treating the accumulated natural fuels with mechanical treatments and underburning will reduce the overall risk of uncharacteristically severe wildland fire. Treated areas will be returned to Condition Class 1, where fire will function as it did historically, in a stand maintenance mode rather than as a stand-replacement event. These actions will fully meet the purpose and need for action related to vegetation treatments by: 1) reducing the risk of loss of healthy large diameter/remnant ponderosa pine, Douglas-fir and western larch trees by developing stands more resilient to insects, disease and fire through vegetation treatments; 2) restoring stand health to improve resiliency to insects and disease; 3) maintaining the health and vigor of established Douglas-fir understories within stands previously partially harvested; and 4) decreasing the rate of spread of laminated root rot and dwarf mistletoe.

The selected alternative meets the intent of the Healthy Forest Restoration Act (HFRA) to reduce fire hazards within a wildland urban interface. The project meets the requirements in HFRA for old growth stands [Section 102(e)2] and large tree retention [Section 102(f)]. This project would retain the structure and composition of pre-fire suppression old growth by promoting fire-adapted species where their health condition does not threaten the overall health of the stand. Also, the treatments would not impact the Special Old Growth Area (A7) in the planning area. Further, the proposed treatments retain large trees suitable to the site in mature stands, and reducing stand density that has increased since the exclusion of fire. Large trees would be retained where they do not threaten the overall health of the stand. Trees with dwarf mistletoe threaten the overall health of the stand and would either not be retained or would be girdled. The HFRA states that the large tree retention requirement must not prevent agencies from reducing wildland fire risk to communities, municipal water supplies, and at-risk Federal land.

In addition, the selected alternative restores wildlife habitat, improves conditions for aquatic resources, and integrates the public's need for access to the area with the needs of aquatic and wildlife resource. The selected alternative protects and restores wildlife habitat by closing and decommissioning roads and by restoring/enhancing the cottonwood-aspen stands. Also, the selected alternative restores aquatic integrity by replacing or removing culverts throughout the project area and by decommissioning roads with high aquatic risk. Finally, the selected alternative integrates the need for wildlife security and aquatic integrity and public's need for access by designating and improving a non-motorized trail system in the planning area. These actions meet the remainder of the purpose and need for action in the planning area.

The selected alternative protects the resources thought the planning area including cultural resources, forage quantity and quality, water quality, wildlife, fisheries, and visual appearance. Under the treatment regime of the selected alternative, forage improvement for big game and other wildlife should be effective for 20 to 25 years. Fuel treatments should be effective for about the same time before stand growth creates fuel conditions that may require another treatment, such as a maintenance underburn. Known cultural sites were avoided by unit design and buffers will be used for additional protection. Units will be adjusted to protect sites during layout when needed. Water quality and quantity will not be negatively affected by the fuels treatment activities.

Other Alternatives Considered

In addition to the selected alternative, I considered the No Action Alternative and Alternative 2. A comparison of the three alternatives can be found in the EA on pages 2-30 to 2-36. The Healthy Forest Restoration Act allows the consideration of a limited number of alternatives [HR 1904, Section 104(c)(1)].

Under the No Action Alternative, current management plans would continue to guide management of the project area: The Dalles Watershed Fuelbreak would not be reinforced and the City of The Dalles Watershed would not be protected from uncharacteristically severe wildfire; hazardous fuels loads and fuels ladders would continue to increase the risk of an uncharacteristic wildfire; and the fire Condition Class would remain unchanged. None of the other restoration projects would be implemented including no road closures, no road decommissioning, no culvert replacements or removals, and no trail construction or reconstruction. Overall, the No Action Alternative does not meet the purpose and need.

Alternative 2 proposes to treat vegetation to discourage wildfire from spreading through National Forest land and into adjacent private land. Treatments would vary depending on the existing vegetative conditions. In total, approximately 1275 acres are proposed for treatment. These treatments include restoration thinning, sapling thinning, cottonwood/aspen enhancement and underburning. Restoration thinning would only occur in previously harvested timber stands. The proposed restoration activities, including road closures/decommissioning, culvert removal/replacement, and trail construction/improvement would remain unchanged in this alternative. Additional details on Alternative 2 are discussed in the EA on pages 2-16 to 2-19.

Public Involvement

Collaboration

The Hood River and Barlow Ranger Districts initiated a 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 will 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.

- On September 2, 2008, the District Ranger invited the collaborative group on a field trip to review a representative sample of the marking in the North Fork Mill Creek planning area. Six people attended the field trip and their comments were incorporated into the final Environmental Assessment and Decision Notice.

  On October 23, 2008, the District Ranger went on a follow-up field trip with Oregon Wild to discuss the issues raised during the objection period. Based on this field trip and some follow-up conversations, the Responsible Official incorporated some of the suggestions in this decision.

Consultation

Confederated Tribes of the Warm Springs Indian Reservation was consulted on this project and did not express any issues with the proposed project.

The effects to Northern spotted owls for this project were consulted on with the U.S. Fish and Wildlife Service through formal consultation on FY 2007-2008 activities within the Willamette province that have the potential to adversely affect spotted owls due to habitat modification and disturbance (FWS reference: 1-7-06-F-0179). No consultation was necessary with National Marine Fisheries Service.

Based on the results of the surveys of historic and prehistoric cultural resource sites, No Effect determination has been made for the Proposed Action. The State Historic Preservation Office has been consulted as to the determinations made and had no objections with this finding.

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, 2008 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 of the EA.

The preliminary Environmental Assessment was released for the HFRA objection period on July 31, 2009. A legal notice in *The Oregonian* was published announcing the objection period. Oregon Wild submitted an objection to the project on August 30, 2008. On September 26, 2008, the Regional Forester for the Pacific Northwest Region of the Forest Service affirmed the project

and instructed the Forest to proceed with the issuance of a decision notice for this project without any substantive changes to the EA.

Issues Generated from Scoping

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 of the EA. 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."

- Large Tree Retention: "The Mill Creek watershed has a severe shortage of large diameter old-growth trees. 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."

- 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."

- 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."

- 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."

- 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."

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an Environmental Impact Statement will not be prepared. I base my finding on the following:

1. **Analysis of the beneficial and adverse impacts (see EA Chapter 3 for full discussion of beneficial and adverse effects):**

   My finding of no significant environmental effects is not biased by the beneficial effects of the action. I find that my decision will have neither a significant beneficial or adverse impact because the acres treated are a small percentage of similar acres across the landscape, and the anticipated effects are similar to those in past fuel reduction projects, which have not proven to cause significant impacts. The selected alternative will result in moving, or maintaining, 2720 acres (41% of the area) in a state that has fuel loadings and vegetation attributes more indicative of historic conditions. This alternative will break up fuels in the high hazard areas which will have an effect on a fire moving through the area and will provide a safer area for suppression resources to suppress new starts. This in turn may alleviate some of the environmental damage and also slow down the forward movement of the wildfire, allowing for a higher success of suppression operation (EA, pages 3-20 to 3-21).

   Overall, this is a very small portion of the Condition Class 3 acres found on the Hood River Ranger District. Project effects are limited to the project area, except smoke which is transported out of the treated areas. The project changes the current condition by moving forest and fuel conditions toward the natural conditions found historically in the area prior to fire suppression. This should have the added benefit of making future fuel and silvicultural actions less intensive and less expensive. Thus it is not a significant federal action.

2. **The degree to which the Proposed Action affects public health and safety:**

   There will be no significant effects on public health and safety because fuel reduction activities are not generally known to negatively impact public health and safety (EA, page 3-185). Burning of activity fuels will be conducted according to the operation guidance for the Oregon Smoke Management Program (EA, page 3-24). The impact is not significant because the area treated is a small component of a much larger area with high fire hazard, and because weather conditions and the random nature of fire ignitions make it impossible to project more than potential benefits. By reducing the overall risk of catastrophic wildfire, the water quality in the adjacent City of The Dalles Watershed will be protected (EA, page 1-2) and firefighter safety will improve and allow them to successfully anchor and contain wildfires before the fires damage private and state lands (EA, page 3-22 to 3-23).

3. **The unique characterics of the geographic area:**

   No prime farmlands, parklands, wild and scenic rivers, or ecologically critical areas are found within the project area. Historic and cultural resources have been protected by project design, and wetlands and streams have been buffered (see Appendix 1 for Project Criteria/Mitigation Measures). Riparian areas are protected by project design (see Appendix 1). Neither essential fish habitat nor designated critical habitat will be adversely affected (EA, page 3-120 to 3-121).

   The project area includes the Mill Creek Tier 1 Key Watershed: tier 1 Key Watersheds were designated as sources for high water quality. The project will be beneficial to the key watershed by decreasing the road density (EA, page 3-89). The planning area includes small areas of Special Old Growth and Research Natural Area, which are Administratively Withdrawn under the Northwest Forest Plan. No treatments will occur within these land allocations (EA, page 1-6). The project does not contain any Special Emphasis Watersheds or Late-Successional Reserves.

   Overall, the project will not negatively impact any of the unique characteristics within the geographic area of the project.

4. **The degree to which the effects on the quality of the human environmental are likely to be highly controversial:**

   The effects on the quality of the human environment are not likely to be highly controversial. There is no known scientific controversy over the impacts of the project. The types of activities proposed have taken place in similar areas and the resulting effects are well-known and understood.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:**

   There were no highly uncertain, unique or unknown risks identified in the North Fork Mill Creek Restoration Opportunities project. Activities approved in this decision are routine projects similar to those that have been implemented under the Mt. Hood National Forest Land and Resource Management Plan over the past 18 years. None are unique or involve unknown risks.

6. **The degree to which the action may establish a precedent for future actions with significant effects:**

   The action is not likely to establish a precedent for future actions with significant effects because this action is not unusual in and of itself, nor does it lead to any further actions that are unique.

7. **Whether the action is related to others actions with individually insignificant, but cumulatively significant impacts:**

   Each resource effects analysis contained in the EA discusses cumulative effects; none

were found to be significant (EA, Chapter 3).

8. The degree to which the action may affect scientific, cultural, or historical resouces:

No districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places are found within the project area. The action also will not cause loss or destruction of significant scientific, cultural, or historical resources because protective measures were part of the project design (EA, pages 3-179 to 3-184). Heritage Resource Report 2008/060606/0012 documented the survey methodology, findings and recommendations for archaeological resources associated with this proposed project. This report concluded with findings of no effect for expected impacts to archaeological resources. Survey methodology was conducted in accordance with the 2004 agreement between Region 6 of the Forest Service, State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation. SHPO was consulted as to the determination made and had no objections with this finding. As such, this project is consistent with the National Historic Preservation Act (NHPA).

9. The degree to which the action may adversely affect endangered or threatened species or habitat:

The action complies with the Endangered Species Act of 1973 for wildlife, aquatic and botanical species. Canada lynx are not present in the planning area. Northern spotted owls are present in the planning area. Tree removal activities and the resulting disturbance on 244 acres which remove (25 acres) or degrade (219 acres) dispersal habitat may affect and are not likely to adversely affect spotted owls. Treatment on 244 acres of dispersal habitat is approximately 12 percent of the dispersal habitat within the project area. Nesting habitat will not be impacted. Tree removal activities that downgrade or remove habitat have a “may affect and likely to adversely affect” determination for Northern spotted owls (EA, page 3-130 to 3-131). The effects to spotted owls for this project were consulted on with the U.S. Fish and Wildlife Service through formal consultation on FY 2007-2008 projects within the Willamette Province that have the potential to adversely affect spotted owls, due to habitat modification and disturbance (FWS reference: 1-7-06-F-0179). Reducing the risk of catastrophic wildlife will protect Northern spotted owl habitat in the long-term. Therefore, this project has both positive and negative effects on Northern spotted owls.

The project will not affect any fish species listed as threatened, endangered, proposed, or sensitive or their critical habitat by this project. The Proposed Action will have no effect on Essential Fish Habitat for any species in the project area as designated under the 1996 Amendment to the Magnuson-Stevens Fishery Conservation and Management Act (EA, page 3-120 to 3-121).

There are no threatened or endangered botanical species in the planning area.

10. Whether the action threatens a violation of environmental laws or requirements:

Discussion of compliance with environmental laws or requirements is identified in the preceding paragraph and in the following section on compliance with other laws and

regulations. This project will not violate any environmental laws and regulations.

Findings Required by Other Laws and Regulations

The project was prepared consistent with the requirements of the **National Environmental Policy Act** (NEPA), its implementing regulations, the Forest Service NEPA handbook, and the **Healthy Forest Restoration Act** (HFRA) (as discussed in the above sections). This project meets the HFRA requirements for old growth stands and large tree retention as discussed on page 2-29 to 2-30 of the EA.

This decision 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 is consistent with the **National Forest Management Act** (NFMA) and the intent of the Forest Plan's long term goals and objectives. The project incorporates appropriate land and resource management plan guidelines for deer and elk winter range and timber emphasis lands. The project area will be managed 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). Also, the project area will be managed to provide lumber, wood fiber, and other forest products on a fully regulated basis, based on the capability and suitability of the land. The proposed project will enhance other resource uses and values that are compatible with timber production as required by the Forest Plan (Forest Plan, Four-289). Lastly, the project meets all of the requirements for vegetation manipulation as required by NFMA (see EA, page 2-28). The project is consistent with the **Mt. Hood National Forest Land and Resource Management Plan**, as amended by the **Northwest Forest Plan** and its standards and guidelines except as noted above.

A portion of the project is located in the Mill Creek **Tier 1 Key Watershed**, as designated by the Northwest Forest Plan. The project is consistent with goals for key watersheds defined in the Northwest Forest Plan (NWFP, page B-19), including decommissioning roads within the watershed (see EA, page 3-89).

As directed by the Pacific Northwest Regional Forest in memo dated January 31, 2008, this project uses the previous **special status species** list for aquatic, botanical and wildlife species since the project was initiated prior to January 31, 2008. For aquatic species, the action will have no impact for Interior Redband Trout, and "will have a may impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or loss of viability to the population or species" for Basalt Juga, Columbia duskysnail, Purple-lipped Juga, and Scott's Apatanian Caddisfly (see EA, pages 3-120 to 3-121). For botanical species, the action will have no impact for Sickle-pod rockcress and Moonwort (see EA, pages 3-145 to 3-146). The action will have "a may impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or loss of viability to the population or species" for several rare and uncommon fungi species as disclosed in Table 3-54 of the EA.

For wildlife species, it was determined that the actions "may impact individuals, but are not

likely to impact populations, nor contribute to a potential loss of viability of this species" for Oregon slender salamander, wolverine, pacific fisher, Dalles sideband, Crater Lake tightcoil, evening field slug, Puget Oregonium, and Columbia Gorge Oregonium (EA, Table 3-53) due to increased human activity. There will be no impact to the bald eagle, great gray owl, and Larch mountain salamander. The project areas will maintain a minimum of 120 linear feet of down woody material and four snags per acre will be retained (see EA, page 132). Therefore, the populations of these species will persist. Without action, more of the species habitat will be at risk to be lost or altered by landscape wildfires.

I have considered the effects to **management indicator species** (MIS) as disclosed in the EA (EA, pages 3-113 to 3-119 and 3-135 to 3-141). Wildlife MIS include mule/blacktailed deer, Rocky Mountain elk, marten, pileated woodpecker, western gray squirrel, wild turkey and snag and down log associated species. MIS aquatic species include all salmonids.

The project is consistent with the **Aquatic Conservation Strategy** objectives. I have also considered the existing condition of riparian reserves, including the important physical and biological components of the fifth-field watersheds and the effects to riparian resources. I find that the selected alternative is consistent with riparian reserve standards and guidelines, and will contribute to maintaining or restoring the fifth-field watersheds over the long term (see EA, pages 3-153 to 3-157). Also, this project will meet **Clean Water Act** standards (see EA, page 3-74 and 3-95). In the project area, three streams are listed on the State of Oregon, **Department of Environmental Quality 303(d) list** including North Fork Mill Creek for temperature, Mosier Creek for temperature and sedimentation, and West Fork Neal Creek for temperature and sedimentation (see EA, page 3-75). The project meets all the requirements to improve water quality to support the beneficial uses of water by protecting and restoring water quality as described in the Watershed Resources section of EA, Chapter 3.

Finally, by considering the prevention of invasive plant introduction, establishment and spread of invasive plants (EA, pages 3-158 to 3-163), the planning process is consistent with the Pacific Northwest **Invasive Plant** Program Preventing and Managing Invasive Plants Record of Decision issued in 2005. Project Criteria/Mitigation Measures are included to prevent the spread and establishment of invasive plants, see Appendix 2.

Management activities shall comply with all applicable air quality laws and regulations, including the **Clean Air Act** and the **Oregon State Implementation Plan**. Also, the Forest Service is operating under the **Oregon Administrative Rule 629-43-043**. The Forest Service is complying and will continue to comply with the requirements of the **Oregon Smoke Management Plan**, which is administered by the Oregon Department of Forestry (EA, page 3-24 to 3-26).

Administrative Review or Appeal Opportunities

This decision is not subject to appeal pursuant to 36 CFR 215.12 (Decisions and actions not subject to appeal). The objection process pursuant to 36 CFR 218 provided the sole means of administrative review for this HFRA project. The response to the objectors dated September 26, 2008 is the final review of this project by any Forest Service or Department of Agriculture

official.

Implementation Date

Implementation of this project may begin immediately.

Contact

For additional information concerning this decision, contact Jennie O'Connor, Natural Resource Planner, Hood River Ranger District, 6780 Highway 35, Mt.Hood-Parkdale, OR 97041; phone 541-352-6002 x634.

Recommended by:

/s/ Daina L. Bambe *December 19, 2008*
DAINA L. BAMBE Date
District Ranger
Hood River Ranger District

Approved by Responsible Official:

/s/ Kathryn J. Silverman for *December 19, 2008*
GARY L. LARSEN Date
Forest Supervisor
Mt. Hood National Forest

APPENDIX 1: Design Criteria/Mitigation Measures for Proposed Action

The National Environmental Policy Act defines "mitigation" as avoiding, minimizing, rectifying, reducing, eliminating or compensating project impacts. The following design criteria and mitigation measures are an integral part of this project and will be implemented with this decision.

Design Criteria/Mitigation Measures for Vegetation Treatments and Trail Proposals

Fuels:

1. Any mechanical slash piling within units will be done with equipment capable of picking up (grasping) slash material and piling (as opposed to pushing/dozing) thereby meeting the objectives of minimizing detrimental soil impacts. Piles will be covered with water resistant material meeting clean air standards to facilitate consumption of piled fuels. Piles need to be 4-feet wide, 4-feet long, and 6-feet high as a minimum*.
2. Hand piles will be constructed with enough fine fuels to allow for ignition during fall and winter months, and covered with water resistant material meeting clean air standards to facilitate consumption of piled fuels. Piles need to be 4-feet wide, 4-feet long, and 6-feet high as a minimum[1].
3. Piles should be as compact and free of dirt as possible.

Vegetation:

1. Patch opening size needs to be sufficient to provide for conditions suitable for early seral species establishment and growth (normally at least 1-acre in size). Generally, patch size should not exceed two acres. However, there may be instances where this will be allowed to address root disease issues. In these instances, the patches will be of irregular shape (with scattered retention pockets) and of limited distribution/number within the unit.
2. Where the understory will be adversely affected, retained trees with a dwarf mistletoe rating of 2 or more will be girdled within unit boundaries.

Roads:

1. As appropriate, where haul route crosses streams on gravel or native-surface roads, roads should be improved to minimize the risk of delivering sediment to streams to the extent practicable. Haul will be restricted to the normal operating season (May 15-October 31), unless weather conditions permit operating outside of this window.
2. As appropriate, the roads should be treated for dust abatement during extreme dry weather.
3. If a proposal to implement winter logging is presented, the following will be considered by the District Ranger and Responsible Official if the ground is not frozen hard enough and/or insufficient snow depth to support the weight and movement of machinery in moist to wet soil conditions (these are based upon observations and monitoring of winter logging in Sportsman's Park):
    a. The proposal will be considered on a unit-by-unit basis using soil types in the area

[1] The Forest Service would meet an *average* width of 8-feet and height of 6-feet for mechanical and hand piles. From past experience with implementation, it is virtually impossible to maintain an exact dimension of fuel piles, so allowance for a small deviation would be made as long as this deviation doesn't jeopardize meeting the above stated goals.

since some soils may be more prone to detrimental damage than others.

b. Since the margin of difference between not detrimental and detrimental soil damage could be so slim under moist to wet soil conditions, monitoring of the logging activity may need to occur daily, or more, as agreed to by sale administrator and soil scientist.
c. Equipment normally expected to traverse the forest, such as feller bunchers, track mounted shears, etc., will be restricted to skid trails once soil moistures are such that even one or two trips are causing detrimental soil damage out in the unit (i.e., not on landings or skid trails).
d. When soils become fully saturated (approach their liquid limit), equipment with a pounds per square inch of 9 or higher will not be used. Typically rubber-tired equipment (e.g., skidders) will not be permitted under these conditions.

4. Locate new temporary roads and landings outside of Riparian Reserves. Use of existing facilities within riparian reserves may be allowed if erosion potential and sedimentation concerns could be sufficiently mitigated. All temporary roads and landings will be decommissioned immediately after harvest operations are completed.
5. Snowplowing will be restricted when a freeze/thaw condition is expected or when a saturated base and subgrade will result.
6. The contractor or permittee will be responsible for snow removal in a manner which will protect roads and adjacent resources.
7. Rocking or other special surfacing and drainage measures may be necessary before the operator will be allowed to use the roads after snowplowing.
8. After snowplowing, snow berms should be removed or breached to avoid accumulation or channelization of melt water on the road and prevent water concentration on erosive slopes or soils. If the road surface is damaged, the contractor or permittee shall replace lost surface material with similar quality material and repair structures damaged in the operations, unless otherwise agreed to in writing.

Soil Resource:

1. All skid trails will be rehabilitated immediately after harvest activities. Landings and temporary roads normally will have erosion control measures installed following fuels or reforestation treatments. If those treatments are anticipated to be delayed beyond the current field season, then temporary effective closure of roads will occur to prevent unauthorized use.
2. In commercial units, ground-based harvest systems should not be used on slopes greater than 30 percent to avoid detrimental soil and/or watershed impacts.

Riparian Areas*:*

1. No vegetation removal or manipulation, or hand piling slash will occur within 60-feet[2] of any perennial and 30-feet[2] of any intermittent streams, seeps, springs or wetlands. This will ensure current stream shading will remain unchanged and protect stream temperatures as well as reduce the likelihood of eroded material entering streams.
2. No wheeled or tracked motorized equipment will be allowed within 100-feet[2] of streams,

[2] The Forest Service would meet an *average* distance of 30-feet, 60-feet, or 100-feet from streams, seeps, springs or wetlands. From past experience with implementation, it is virtually impossible to maintain an exact distance from a wet area due to stream sinuosity and dense riparian vegetation so allowance for a small deviation would be made as long as this deviation doesn't jeopardize meeting the above stated goals.

seeps, springs or wetlands. This will reduce the chance of sediment delivery to surface water.

3. Fueling of gas-powered machinery will not occur within 150-feet of any live waters to maintain water quality. Each fueling area shall have a hazardous material recovery kit, including absorbent pads on site.
4. Use erosion control measures where de-vegetation may result in delivery of sediment to adjacent surface water. Soil scientists or hydrologists will assist in evaluation of sites to determine if treatment is necessary and the type of treatment needed to stabilize soils.
5. Any felled trees which fall into the 60-foot unmanaged area of perennial streams or the 30-foot unmanaged area of intermittent streams, seeps, springs or wetlands will be bucked at the unmanaged edge and only the portion of tree outside these areas could be removed.
6. Low severity burns[3] should constitute the dominant type of controlled burn within the Riparian Reserve, resulting in a mosaic pattern of burned and unburned landscape.
7. Moderate-severity burns[4] are permitted in no more than 20% of the Riparian Reserves to invigorate desirable deciduous species.
8. Ignition may occur anywhere in the Riparian Reserve as long as all other design criteria are met.
9. Burning activities excluded in the Riparian Reserves are as follows: No mechanical piles, mechanical fire line construction (e.g. dozer, small tractor etc.), or chemical fire retardants. Fireline construction is defined to mean activities that result in exposure of bare mineral soil. Hand fireline construction should be minimized within the Riparian Reserve and wet line or black line is preferred. An exception to this will be situation where fireline is needed to control burn intensity and spread due to unforeseen circumstances. In these situations, there will be an emphasis to mitigate any potential for sedimentation to streams.
10. All trails crossing perennial or fish-bearing streams will have a bridge as a stream crossing, including but not limited to West Fork Neal Creek and tributary to North Fork Mill Creek. All stream crossing will meet the Aquatic Conservation Strategy objectives.

Wildlife:

1. Known Northern spotted owl activity centers will be protected through the implementation of seasonal operating restrictions (March 1- July 15) for Units 41, 42, 47, 54, and 55. In the event that new activity center(s) is/are located during the period of the contract(s) seasonal operating restrictions will be implemented in the area affected.
2. No underburning may take place less than ¼-mile from spotted owl activity centers (between March 1 and July 15).
3. A seasonal operating restriction (restricting harvest and fuels treatment activities) for winter range will be implemented with this project from December 1 through April 1 for Units 10, 11, 12, 14, 15, 46 through 56, 70, and 71.
4. A seasonal closure of December 1 thru April 1 will apply to portions of trails that are within deer and elk winter range (B10 land allocation).

[3] Low severity burn is defined as: "Small diameter woody debris is consumed; some small twigs may remain. Leaf litter may be charred or consumed, and the surface of the duff may be charred. Original forms of surface materials, such as needle litter or lichens may be visible; essentially no soil heating occurs."

[4] Moderate severity burn is defined as: "Foliage, twigs, and the litter layer are consumed. The duff layer, rotten wood, and larger diameter woody debris is partially consumed; logs may be deeply charred; shallow ash layer and burned roots and rhizomes are present. Some heating of mineral soil may occur if the soil organic layer was thin."

5. Rare and uncommon species needing protection will be designated on-the-ground prior to ground disturbing activities occurring.

Botany:

1. Buffer seep/spring habitat in Unit 95 by at least two site potential tree heights for *Botrychium minganense* (moonwort). A botanist will visit site to post buffer.
2. Buffer seep/spring habitat in sapling thinning treatment (Unit 25) for *Botrychium minganense* (moonwort). A botanist will visit site to post buffer.
3. Buffer grassland habitat by approximately 50-meters (164 feet) for Sickle-pod rockcress in grassland underburn (Unit 92) on the summit of Mill Creek Ridge. A botanist will visit site to post buffer.
4. Collect seed from Sickle-pod rockcress and native grasses during July to September 2008 and 2009 to sow into Unit 92 after proposed treatments completed.

Invasive Species:

1. It is recommended that "pre-treatment" occur before any harvest activities are implemented along roads 1700 (treatment sites #66-044 and #66-074), 1700-013 (treatment site #66-055), 1700-662 (treatment sites #66-081 and #66-033). If possible schedule implementation of work from infestation-free areas into infested areas rather than vice-versa.
2. Incorporate the standard contract provision that require cleaning of equipment.
3. The process for locating all new skid trails and landing locations will be coordinated with a noxious weed specialist so as to insure these locations are not within any currently established noxious weed populations. If necessary, pre-treat existing landings and skid trails that may be used for project implementation where existing infestations present an unacceptable risk of spreading established invasive plant populations.
4. If the need for restoration/revegetation of skid trails and landings is identified, the use of native plant materials are the first choice for meeting this objective where timely natural regeneration of the native plant community is not likely to occur. Non-native, non-invasive plant species may be used in any of the following situations: 1) when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality and to help prevent the establishment of invasive species), 2) as an interim, non-persistent measure designed to aid in the re-establishment of native plants, 3) if native plant materials are not available, or 4) in permanently altered plant communities.
5. If using straw, hay or mulch for restoration/revegetation in any areas, use only certified, weed-free materials.
6. Reforestation and restoration efforts should limit use of container stock or other practices where soils or other growing mediums are brought into the planning area.
7. Create a 3-5 year implementation plan for prescribed fire in areas that are dominated by invasive non-native grasses and noxious weeds. Include collection of fire tolerant perennial native bunch grasses for seed increase contract.
8. Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.

Recreation (Trails and Campgrounds):

1. Trees harvested within the 50-feet of Gibson Prairie Horse Camp will be felled directionally away from the camp
2. All landings and skid trails will be located at least 100-feet from Gibson Prairie Horse Camp unless blocked by topography from view.
3. All brush piles within 100-feet of Gibson Prairie Horse Camp will be disposed of within one year. Exceptions may occur under agreement with volunteers hosting at the horse camp.
4. All stumps within 100-feet of Gibson Prairie Horse Camp will be cut to 6-inches in height or less.
5. Prescriptions will meet the Partial Retention Visual Quality Objectives (VQO) in the area viewed from the Gibson Prairie Horse Camp.
6. The methods used to rehabilitate landings, skid trails and temporary roads will be designed to meet VQO within foreground of Gibson Prairie Horse Camp.
7. Ground disturbance and activity debris resulting from project activities within one year will become visually subordinate in the immediate foreground Gibson Prairie Horse Camp.
8. New trail construction will be coordinated with an archeologist.
9. All new trail construction will be made compatible with existing range pasture fences within the Long Prairie Grazing Allotment. The trails may be made compatible through measures, such as installing gates or walk-throughs.

Heritage Resource Sites:

1. All designated cultural resource sites (excepting these described in heritage resource design criteria #3 below) requiring protection will have a 100-foot buffer zone where heavy machinery will be excluded. Treatment of vegetation by hand could still occur as necessary.
2. Prescribed burning may occur, but piling may not occur within the flagged buffer zones.
3. All culturally-modified trees or trees with insulator mountings will be avoided during harvest activities, unless otherwise specified by the archaeologist.

Design Criteria/Mitigation Measures for Road Decommissioning and Culvert Projects

1. Ensure that an experienced professional fisheries biologist, hydrologist or technician is involved in the design of road decommissioning and/or culvert removal/replacement projects. The experience should be commensurate with technical requirements of a project.
2. Follow the appropriate Oregon Department of Fish and Wildlife (ODFW) guidelines for timing of in-water work. Exceptions to the ODFW in-water work windows must be requested by the Forest or its contractors, and subsequently approved by ODFW.
3. Project actions will follow all provisions and requirements (including permits) of the Clean Water Act for maintenance of water quality standards as described by the Oregon Department of Environmental Quality.
4. All equipment used for restoration work shall be cleaned and leaks repaired prior to entering the project area. Remove external oil and grease, along with dirt, mud and plant parts prior to entering National Forest System lands. Thereafter, inspect equipment daily for leaks or accumulations of grease, and fix any identified problems before entering streams or areas that drain directly to streams or wetlands. This practice does not apply to service vehicles

traveling frequently in and out of the project area that will remain on the roadway.

5. Spill Prevention Control and Containment Plan (SPCCP) – The contractor will be required to have a written SPCCP, which describes measures to prevent or reduce impacts from potential spills (fuel, hydraulic fluid, etc). The SPCCP shall contain a description of the hazardous materials that will be used, including inventory, storage, handling procedures; a description of quick response containment supplies that will be available on the site (e.g., a silt fence, straw bales, and an oil-absorbing, floating boom whenever surface water is present.).
6. All trucks used for refueling shall carry a hazardous material recovery kit, including absorbent pads to be used during refueling if that occurs in the project area. Any contaminated soil, vegetation or debris must be removed from National Forest System Lands and disposed of in accordance with state laws.
7. Refuel mechanized equipment at least 150 feet from water bodies or as far as possible from the water body where local site conditions do not allow a 150-foot setback to prevent direct delivery of contaminants into water.
8. Absorbent pads will be required under all stationary equipment and fuel storage containers.
9. Dispose of slide and waste material in stable sites out of the flood prone area. Waste material other than hardened surface material (asphalt, concrete, etc) may be used to restore natural or near-natural contours.
10. Trees that need to be felled during project implementation should be directionally felled, where feasible, away from the road prism and into the surrounding forest. Trees will not be bucked and will be left undisturbed to the extent possible.
11. Prior to implementation of any road decommissioning, culvert removal, or culvert replacement invasive plant surveys should be performed at the project site(s). If any invasive plants are found on or near roads, the full extent of the invasion should be determined by surveying off road to the extent that it is reasonable to assume the invasive species may have spread. The invasive plant infestations should then be mapped and weed site reports completed. Depending upon the seriousness of the weed invasion, as determined by a trained botany or noxious weed coordinator, recommendations for treatment of the weed site(s) will be made and an updated Noxious Weed Risk Analysis and Mitigation Report will be prepared.
12. Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.
13. Place sediment barriers prior to construction around sites where significant levels of fine sediment may enter the stream directly or through road ditches. Maintain barriers throughout construction.
14. For road decommissioning projects within riparian areas, re-contour the road prism to mimic natural floodplain contours and gradient to the greatest degree possible.
15. Drainage features used for stormproofing projects should be spaced to disconnect road surface runoff from stream channels.
16. Minimize disturbance of existing vegetation in ditches and at stream crossings to the greatest extent possible.
17. Conduct activities during dry-field conditions—low to moderate soil moisture levels.
18. Restore the stream channel and banks to original pre-road (natural) contours as much as possible when culverts are removed from the road prism.

19. When removing a culvert from a non-fishing bearing stream, aquatic specialists shall determine if culvert removal should follow design criteria outlined below in the Culvert Replacement section. Culvert removal on fish bearing streams shall adhere to the Culvert Replacement design criteria.

Culvert Replacement Only:

1. Follow stream simulation design requirements for all new stream crossings (i.e. match, to the degree possible, stream width, slope, and substrate conditions with up and downstream conditions).
2. Rip Rap – The use of riprap is permissible above bankfull height to protect the inlet or outlet of new culverts or open-bottomed arches. If the use of riprap is required for culvert stability, then additional analysis may be required to ensure that the structure is not undersized. Riprap may only be placed below bankfull height when necessary for protection of abutments and pilings for bridges. However, the amount and placement of riprap around the abutments and/or pilings should not constrict the bankfull flow.
3. Grade Control Structures – Grade control structures are permitted to prevent headcutting above or below the culvert or bridge where natural channel regarding is not desired. Grade control typically consists of boulder structures that are keyed into the banks, span the channel, and are buried in the substrate.
4. Road Dips – Where applicable, incorporate road dips into stream crossing design, to ensure catastrophic flood events will transport overflow back into the stream channel instead of onto the road bed.
5. Structures containing concrete must be cured or dried before they come into contact with stream flow.
6. When removing woody debris from the road-crossing inlet, place the debris downstream of the road crossing.
7. In streams where fish are present above and/or below the culvert, a fish collection and removal procedure shall be implemented prior to dewatering (see below) and construction. The project area shall remain isolated using block nets or some other means during the construction period.
8. **Dewater Construction Site**: The preferred method for replacing a culvert involves dewatering the construction site to minimize impacts to water quality and fish populations. Upstream of the isolated construction area, divert flow around the construction site with a coffer dam (built with non-erosive materials) and an associated pump or a by-pass culvert. Pumps must have fish screens and be operated in accordance with NMFS fish screen criteria (NMFS 1995). Dissipate flow energy at the bypass outflow to prevent damage to riparian vegetation or stream channel. If diversion allows for downstream fish passage (i.e., is not screened), place diversion outlet in a location to promote safe reentry of fish into the stream channel, preferably into pool habitat with cover. When necessary, pump seepage water from the de-watered work area to a temporary storage and treatment site or into upland areas and allow water to filter through vegetation prior to reentering the stream channel.
    - **Stream Re-watering**: Upon project completion, slowly re-water the construction site to prevent loss of surface water downstream as the construction site streambed absorbs water and to prevent a sudden increase in stream turbidity. Monitor downstream during re-watering to prevent stranding of aquatic organisms below the construction site.

APPENDIX 2: North Fork Mill Creek Restoration Project Stand Treatment Parameters

Stand condition	Douglas-fir	White fir	Ponderosa pine, larch, western white pine, western red cedar, etc
Stands with root-rot pockets (where target understory or target residual stand is not root rot susceptible species) - openings created through tree removal generally should be around 1-acre in size; however, larger openings may occur if they are naturally appearing in shape (amoeba shaped). The objective is to leave the best of what is left in the largest size class available and to avoid leaving openings that are larger than 2-acres in size. Other treatments such as pre-commercial thinning, pruning, underburning, etc. will still occur. Snag and on-site woody debris will be left on-site, however may be adjusted to meet fuel loading concerns.	30-inch and greater size class Retain unless compelling reason present to girdle. For example, tree presents a fuels risk (i.e., ladder fuel) to adjacent desirable species (ponderosa pine, western white pine, larch, and other healthy fire-resistant species) and measures such as pruning of ladder fuel will not adequately address the risk.	30-inch and greater size class Retain unless within/adjacent to root rot pocket or if a fuels risk to adjacent desirable species, then remove.	Retain all unless stocking density or mistletoe hazard rating (normally when more than one-third of the tree crown is infected with mistletoe) compromises long-term health of residual stand. In that case only remove the smaller trees, but still retain variable density characteristics of the stand. Girdle larger mistletoe infected trees and retain on site unless retention results in excessive fuels loading (refer to dimension parameters identified under Douglas-fir). Plant openings with these resistant species
	24 to 29-inch size class Retain unless compelling reason to girdle (see above). If of such quantity as to result in excessive fuel loading, remove those in the lower end of the diameter class. Generally, the emphasis will be to use the removed trees in this size class for **restoration*** projects. Retain if in clumps that are healthy and not susceptible to infection due to proximity to root rot pockets	24 to 29-inch size class Remove those that are infected and those that are at the edges of infection centers unless there is insufficient number of Douglas-fir on site to meet snag and/or on-site woody debris requirements	
	Less than 24-inch size class Remove those that are clearly infected or at the edge of infection centers. Retain healthy clumps, if available and not overstocked. Thin overstocked clumps with emphasis to leave the best in the largest size class available.	Less than 24-inch size class Remove unless retention of healthy white fir is necessary to meet other resource objectives	

Stand condition	Douglas-fir	White fir	Ponderosa pine, larch, western white pine, western red cedar, etc
Stands where the objective is to restore historical species composition and where target understory is comprised of species such as Douglas-fir, ponderosa pine, western larch, western white pine, western red cedar, etc. Most of these stands had previous entry and resulted in a residual stand that was a seed tree, shelterwood, partial cut (usually selective species removal), or plantation (old clearcuts). These are stands where commercial thinning is prescribed or where there is a need to start over in terms of the understory component (current component has limited ability to achieve long-term growth and health objectives). Other treatments such as sapling thinning, pruning, underburning (where appropriate) will still occur. The emphasis is to leave the best of what is available in the largest size class. Snag and on-site woody debris will be left on-site, however may be adjusted to meet fuel loading concerns.	30-inch and greater size class Retain. If tree is infected with mistletoe and it compromises viability of understory then girdle.	30-inch and greater size class Retain unless presence compromises establishment of target understory, then girdle and leave on-site.	Retain all unless stocking density or mistletoe hazard rating (normally when more than one-third of the tree crown is infected with mistletoe) compromises long-term health of residual stand. In that case, only remove the smaller trees, but still retain variable density characteristics of the stand. Girdle larger mistletoe trees and retain on site unless retention results in excessive fuels loading (refer to dimension parameters identified under Douglas-fir). Plant openings with these resistant species
	24 to 29-inch size class Girdle all that are infected with dwarf mistletoe and if left on-site will compromise health and viability of understory. If of such quantity so as to result in excessive fuel loading, remove those in the lower end of the diameter class. Generally, the emphasis will be to use the removed trees in this size class for **restoration*** projects.	24 to 29-inch size class Remove unless: 1) retention of healthy white fir is needed to meet other resource objectives; or 2) if there is insufficient # of other species on-site to meet snag and/or woody debris requirements.	
	Less than 24-inch size class Remove those that are infected with mistletoe and if left on site will compromise health and viability of understory. Thin where the stand is overstocked with emphasis to leave the best of what's left in the largest size class.	Less than 24-inch size class Remove unless retention of healthy white fir is necessary to meet other resource objectives	

Restoration* generally includes those projects that will result in a benefit to resources on-the-ground such as stream and aquatic restoration, trail restoration, road decommissioning, and site productivity restoration.