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Billy Bob Hazardous Fuels Reduction Project

Environmental Assessment

Barlow Ranger District Mt. Hood National Forest

Dufur, Oregon

Legal Description: T2S, R11E, Sections 1, 2, 3, 4, 8, 9, 19, 11, 12, 13,
14, 15 and 16

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Table of Contents

| | |
|---|------------|
| Table of Contents..... | i |
| List of Tables..... | iii |
| List of Figures..... | 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..... | 1-5 |
| Proposed Action..... | 1-8 |
| Decision Framework | 1-9 |
| Public Involvement..... | 1-9 |
| Collaboration | 1-9 |
| Scoping/Publication Involvement..... | 1-10 |
| Issues | 1-10 |
| CHAPTER 2 – Alternatives, including the Proposed Action..... | 2-1 |
| Alternative Formulation | 2-1 |
| Alternatives Considered, but Eliminated from Detailed Study..... | 2-1 |
| Alternatives Considered in Detail..... | 2-3 |
| No Action Alternative | 2-3 |
| Proposed Action Alternative | 2-3 |
| Mt. Hood Land and Resource Management Consistency..... | 2-14 |
| Design Criteria/Mitigation Measures for Proposed Action..... | 2-17 |
| Regulatory Framework..... | 2-22 |
| Comparison of Alternatives..... | 2-23 |
| CHAPTER 3 –Environmental Consequences..... | 3-1 |
| Setting the Stage | 3-1 |
| Fire/Fuels Management..... | 3-2 |
| Air Quality/Smoke Management | 3-18 |
| Vegetation Resources..... | 3-23 |
| Transportation System..... | 3-40 |
| Soil Productivity | 3-44 |
| Watershed Resouces..... | 3-53 |
| Aquatic Species and Associated Habitat | 3-71 |
| Wildlife Resources | 3-87 |
| Aquatic Conservation Strategy Objectives..... | 3-99 |
| Botanical Species | 3-106 |
| Invasive Plant Species..... | 3-108 |
| Recreation and Trails..... | 3-113 |
| Visual Quality | 3-118 |

Heritage Resources 3-125
Social Impact Analysis/Environmental Justice 3-131
CHAPTER 4 – Consultation and Coordination..... 4-1
Federal, State and Local Agencies 4-1
Tribes 4-1
Others 4-2
List of Preparers..... 4-2
REFERENCES..... Ref-1
GLOSSARY Glossary-1
APPENDICES
Appendix 1 - Collaborative Group Recommendations to the USDA Forest Service
Appendix 2 - Issues Generated through Scoping

LIST OF FIGURES

| | |
|-------------|---|
| Figure 1-1 | Vicinity Map |
| Figure 1-2 | Existing Condition for Billy Bob Planning Area |
| Figure 1-3 | Desired Future Condition for Billy Bob Planning Area |
| Figure 1-4 | Mt. Hood Land and Resource Management Plan Land Allocation Map |
| Figure 2-1 | Priority Area Map |
| Figure 2-2 | Proposed Action – Unit Map |
| Figure 2-3 | Map of 100-acre Late Successional Reserve |
| Figure 2-4 | Map of proposed temporary roads |
| Figure 3-1 | Physical evidence of past fire occurrence in the untreated stands |
| Figure 3-2 | Fuel model example |
| Figure 3-3 | Fuel loading in Unit 6 |
| Figure 3-4 | Continuous fuel ladder near Camp Baldwin |
| Figure 3-5 | Dense multi-storied stand in the Eightmile drainage |
| Figure 3-6 | Target canopy cover in project area |
| Figure 3-7 | Map and estimated acres of vegetation treatments on private lands |
| Figure 3-8 | Soil map units and proposed treatment areas |
| Figure 3-9 | Map showing the location of the three 7th field watershed |
| Figure 3-10 | Water temperature monitoring sites |
| Figure 3-11 | Ramsey Creek wood distribution by River Mile in 2004. |
| Figure 3-12 | Fish Distribution for Winter Steelhead Trout and Essential Fish Habitat for Chinook and Coho Salmon |
| Figure 3-13 | Overstocked stands with mistletoe present |
| Figure 3-14 | Typical view of the proposed treatment area as seen from Forest Road 44 |
| Figure 3-15 | Another typical view as seen from Forest Road 44 |
| Figure 3-16 | A third typical view of the project area |
| Figure 3-17 | An approximation of the tree density that would be left following treatment |

LIST OF TABLES

| | |
|-----------|--|
| Table 2-1 | Summary of Proposed Treatments |
| Table 2-2 | Treatment prescriptions by priority and treatment units |
| Table 2-3 | Road reconstruction and maintenance needs for identified haul routes |
| Table 2-4 | Comparison of Alternatives in Relation to Identified Objectives and/or Issues Raised by the Public |
| Table 3-1 | Condition Class Attributes |
| Table 3-2 | Condition Class in Project Area |
| Table 3-3 | Number of Fires / Year |
| Table 3-4 | Susceptibility of Stand Replacing Fires |
| Table 3-5 | Fire Hazard Characteristics |
| Table 3-6 | 97th Percentile Weather |
| Table 3-7 | Fire Behavior Characteristics - 97th Percentile Weather Conditions |

| | |
|------------|--|
| | (average 4 mph eyelevel wind) |
| Table 3-8 | Fire Behavior Characteristics - 97th Percentile Weather Conditions (average 8 mph eyelevel wind) |
| Table 3-9 | Fuel Model – Fire type based on Crown Base Height (4 mph and 8 mph eyelevel) |
| Table 3-10 | Acres of wildfire versus activities proposed |
| Table 3-11 | Comparison of particulate matter (10) release from wildfire versus activities proposed |
| Table 3-12 | Comparison of particulate matter (2.5) release from wildfire versus activities proposed |
| Table 3-13 | Vegetation types in Billy Bob Project Area |
| Table 3-14 | Acres of Harvest on National Forest System lands in analysis area by decade. |
| Table 3-15 | Existing Site and Vegetative Condition of Treatment Stands within the Billy Bob Hazardous Fuel Reduction Project Area. |
| Table 3-16 | Forest type of stands proposed for underburning only |
| Table 3-17 | Target canopy cover in fuel reduction units |
| Table 3-18 | System of classified Forest Development Roads that provide partial access to the National Forest System Lands inside the project area |
| Table 3-19 | Private roads that are inside the boundary for the Billy Bob Hazardous Fuel Reduction Project |
| Table 3-20 | Summary of soil types in the analysis area and associated management interpretations from Mt Hood Soil Resource Inventory |
| Table 3-21 | Summary of Forest Plan Soil Standards |
| Table 3-22 | Summary of stands monitored with shovel probe transects |
| Table 3-23 | Highest 7-day average maximum stream temperatures (in °C) |
| Table 3-24 | Total specified road densities for 7th field watersheds within the planning area |
| Table 3-25 | Total specified road densities for 6th field watersheds within the planning area |
| Table 3-26 | Stream shade values |
| Table 3-27 | Stream shade values for streams in the South Fork Mill Creek subwatershed |
| Table 3-28 | Shade Zones Next to Streams |
| Table 3-29 | Road densities within 7th field watersheds |
| Table 3-30 | Qualitative summary of potential cumulative watershed effects |
| Table 3-31 | 2006 Stream Temperature Summary for Ramsey Creek and Eightmile Creek |
| Table 3-32 | Definition of wood size classes east of the High Cascades |
| Table 3-33 | Existing number of in-channel woody debris and woody debris density vs. the LRMP, PIG, and NOAA standards |
| Table 3-34 | Existing number of pools; primary pools (pools $\geq 3'$ depth) frequency vs. LRMP standard; and frequency of pools of all depths vs. the PIG and NOAA standards |
| Table 3-35 | List of Proposed, Endangered, Threatened, or Sensitive (PETS) Fish and Aquatic Mollusk Species |

| | |
|------------|---|
| Table 3-36 | Status of threatened, endangered, and proposed species; USDA Forest Service Region 6 (R6) Sensitive Species |
| Table 3-37 | Effects for Threatened, Endangered and Sensitive Wildlife Species |
| Table 3-38 | Individual ACS Indicator Table |
| Table 3-39 | Individual ACS Objective Assessment at Multiple Scales |
| Table 3-40 | Noxious Weed Ratings in the Planning Area |
| Table 3-41 | Visual Quality Objectives (VQOs) for all levels of trails |
| Table 3-42 | Visual Quality Objectives (VQOs) for viewsheds |

SUMMARY

In an effort to reduce the risk of wildfire as directed by Wasco County Community Wildfire Protection Plan and to respond to a request from the Boy Scouts, Barlow District Ranger convened a collaborative group under the authorities of the Healthy Forest Restoration Act (HFRA) to assist with developing recommended actions for protecting the Camp Baldwin Boy Scout Camp. Camp Baldwin is located approximately 15-miles west of Dufur, Oregon. Camp Baldwin is located within wildland-urban interface in Mt. Hood National Forest, along Forest Service Road 44. The collaborative group recommended fuels reduction treatments that focused on thinning of dead, dying and diseased trees; removing ladder fuels; reducing crown density to a level that a crown fire could not be easily sustained through the forest; and underburning. After receiving the recommendations, District personnel began the interdisciplinary process of developing a detailed fuels reduction proposal that would meet the objectives of the area and respond to the recommendations of the collaborative group.

The purpose of this proposal is to reduce hazardous fuels in the area around the Billy Bob SnoPark and Camp Baldwin Boy Scout Camp. The proposed activities would reduce the risk of an uncharacteristically severe wildfire, improve community wildfire protection, and move the landscape toward more sustainable conditions. In order to meet this purpose, the Forest Service proposes to reduce hazardous fuels with mechanical treatments on approximately 1000 acres and underburn approximately 3000 acres on National Forest System lands. The purpose of all the activities is hazardous fuels reduction (removal of surface fuels, removal of ladder fuels, and opening of the canopy). The mechanical treatment methods will consist of tree thinning from below, machine piling, hand thinning, pruning by hand, machine mastication, and manual brush removal. A total of approximately 1000 acres will be treated by mechanical methods and up to 800 of these acres would be underburned in the future. Maintenance underburning of the remaining underburning acres also would occur in areas to the south and east of Camp Baldwin to maintain their current condition.

The project area was divided into treatment zones or Priority areas were developed for treatment based on where the Forest Service was to concentrate efforts depending on available funding. Priority area 1 is to be treated first for immediate protection of Camp Baldwin and adjacent private lands, with Priority area 2 as re-enforcement of treatments to Priority 1. The Priority 3 area is not an immediate treatment area but maintenance underburning would be done for areas previously treated using prescribed fire. Mechanical treatments would be addressed in future NEPA analysis.

Based on the interdisciplinary analysis presented in this environmental assessment and the project record, the Forest Supervisor will decide whether or not to authorize the implementation of fuels reduction activities in the Billy Bob/Camp Baldwin area; and what, if any, mitigation and monitoring measures are needed.

Billy Bob Fuels Reduction

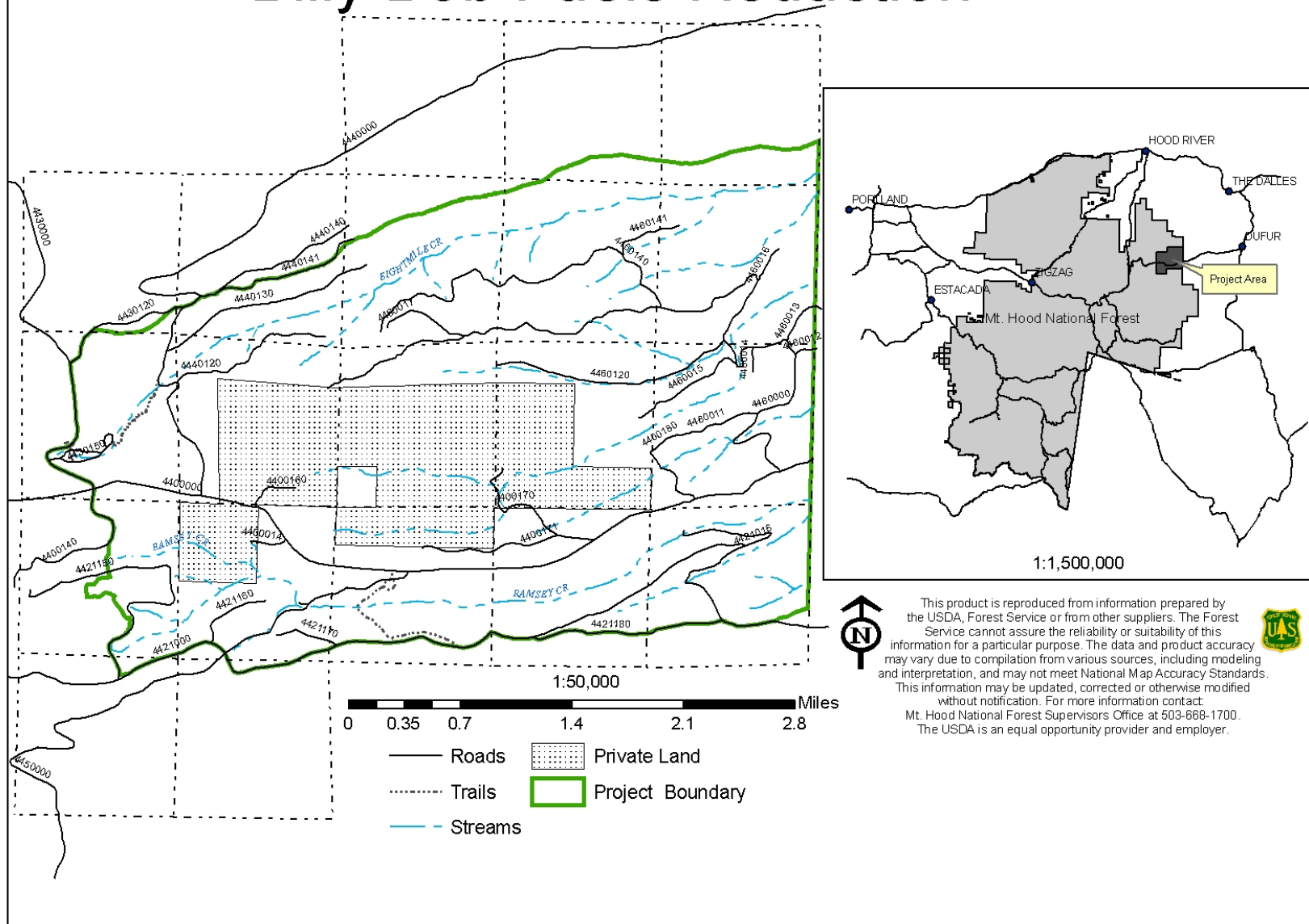


Figure 1-1: Vicinity Map. Location of Billy Bob project area in relation to the entire Mt. Hood National Forest

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. This project lies within an identified WUI, as outlined in the Wasco County CCWP. HFRA defines an at-risk community as “a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to Federal lands” (H.R. 1904, pg. 3). This Environmental Assessment discloses the direct, indirect, and cumulative environmental effects that would result from the proposed action and a no action baseline. 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 as well as the No Action Alternative. This discussion also includes possible 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 the Proposed Action versus the No Action Alternative in terms of meeting objectives and addressing issues.
- *Environmental Consequences:* This section describes the environmental effects of no action as well as the trade-offs and effects of implementing the Proposed Action. 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 Proposed Action.
- *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 Barlow Ranger District Office in Mt. Hood, Oregon.

Background

This area is located primarily in the Upper Ramsey Creek and Upper Eightmile Creek Watersheds on the Mt. Hood National Forest in Wasco County. Vegetation includes mixed conifer forests, meadows, and open grassy slopes. Average annual precipitation ranges from 50 inches on the western edge to 30 inches on the eastern edge of the project area, occurring mostly during the winter months. Elevation in areas proposed for treatment ranges from 2,500 to approximately 4,000 feet. Primary aquatic features in the project area include Ramsey Creek and Eightmile Creek. Also, the project area includes a portion of the Wolf Run Ditch which provides water for the upper Eightmile Valley. Much of the ditch has been converted from surface flow to pipe.

Camp Baldwin Boy Scout property, located within Mt. Hood National Forest on Forest Service Road 44, was identified in the Wasco County Community Wildfire Protection Plan (CWPP) (Hulbert, 2005) as a high risk area in the wildland-urban interface (WUI). The CWPP was initiated by the Wasco County Board of Commissioners and carried out with a collaborative, interagency team. The planning process was designed to meet the guidance in the National Fire Plan and the Healthy Forest Restoration Act of 2003 (H.R. 1904). The primary purpose for the plan is to identify and prioritize areas in the county with high levels of wildfire hazards and to develop a strategy to reduce these hazards (CWPP, pg. 4). One of the major concerns identified in the CWPP was heavy fuel loads on National Forest System and private forest lands along the western portion of the county and the risk of large forest fires beginning on these lands and moving to adjacent private lands, especially those with residential developments (CWPP, pg. 6). As part of the CWPP, Camp Baldwin was identified as a high priority for treatment according to a risk rating and recommendations from the Forest Service. Camp Baldwin has conducted hazardous fuel reduction projects for wildfire protection purposes.

In an effort to reduce the risk of wildfire as directed by CWPP, Camp Baldwin Boy Scout Camp has conducted fuels treatments within their property to ensure the safety of the campers during the summer months and to protect the structures. To further ensure the safety of the camps and success of the fuel treatments, Camp Baldwin requested that the Barlow District Ranger reduce hazardous fuels and address forest health conditions on the lands adjacent to the Camp Baldwin. The adjacent lands include a 40-acre area with a special use permit issued to the Boy Scouts of America to allow camping. The letter states: "The 40-acre special use permit area has received little treatment from the Forest Service. The white fir trees continue to parish at a rapid rate resulting in a rapid overstocking of fuels within the special use permit area." The letter continues to discuss the immediate threats and future safety concerns to established camp sites within the 40-acre area.

To address these concerns, the Barlow District Ranger convened a collaborative group under the authorities of the Healthy Forest Restoration Act (HFRA) to assist with developing recommended actions. The collaborative working group met from December 2005 to March 2006. The collaborative group was composed of the following representatives: federal and state agencies (USDA Forest Service, U.S. Fish & Wildlife Service), watershed councils (Wasco County Soil and Water Conservation District), environmental groups (Oregon Wild), private citizens, neighboring landowners (Camp Baldwin, Woodland Management Inc.), and recreational organizations (Columbia Gorge Power Sledders). The group recommended fuels

reduction treatments that focused on thinning of dead, dying and diseased trees; removing ladder fuels; reducing crown density to a level that a crown fire could not easily carry through the forest; and underburning. Other recommendations included plantation thinning, road decommissioning, and an educational outreach focused on the role of fire placed at the Underhill Site (an area near Camp Baldwin set aside for environmental education). See Appendix 1 – Collaborative Group Recommendations to the USDA Forest Service for more details.

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

Purpose and Need for Action

The purpose of this proposal is to reduce hazardous fuels in the area around the Camp Baldwin Boy Scout Camp. The proposed activities would reduce the risk of an uncharacteristically severe wildfire, improve community wildfire protection, and move the landscape toward more sustainable conditions. The underlying needs for this project are for:

- Protecting the structures and improvements on the Camp Baldwin Boy Scout Camp from uncharacteristically severe wildfire;
- Reducing hazardous fuel loadings (excess down wood that contributes to large fire intensity) and fuel ladders (small reproduction that increases potential for crown fire initiation) to reduce fire behavior on National Forest System lands adjacent to Camp Baldwin and nearby private land as well as adjacent lands to the east of the National Forest System boundary; and,
- Changing existing fire condition class around Camp Baldwin, private lands, and adjacent private land east of National Forest System boundary to a more historical condition.

Fire suppression efforts over the past 100 years, favorable climatic conditions, vegetation growth and dead fuels resulting from insects and diseases have altered stand composition and structure, and increased tree and brush densities. The high density of the stands contributes to mortality of trees because of competition for nutrients, water and sunlight. Insects and diseases are more likely to kill trees that grow in dense, crowded conditions. Dwarf mistletoe-infected trees, diseased trees, insect-killed trees, and down fuel are creating continuous fuel ladders from the ground to the tree crowns. The majority of the National Forest System lands in the area has been mapped as Condition Class 3, indicating these lands have missed multiple natural fire events and now contain unnaturally high fuel situations. As such, fire regimes have been significantly altered from their natural range; the risk of losing key ecosystem components is high; and vegetation attributes have been appreciably altered.

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 in the 50 years or less (moist Douglas-fir),

to the 50-100 year fire return interval of the mixed conifer zone (grand fir, western hemlock, white pine, etc.). These species typically have a low to moderate fire tolerance. 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 1-1: Existing Conditions).

Management Direction

The Billy Bob Hazardous Fuels Reduction 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 direction.

Applicable National Fire Plan goals and objectives include:

- Reduce the number of small fires that become large;
- Restore natural ecological systems to minimize uncharacteristically intense fires;
- Create new jobs in both the private and public sectors;
- Improve capabilities for state and volunteer fire organizations; and,
- Reduce the threat to life and property from catastrophic wildfire.

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. The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. Goals, objectives and desired future conditions of the management areas within the project area are discussed below in the description of land allocations. In addition, management direction for the area is provided in three major Forest Plan amendments:

- The Northwest Forest Plan (NWFP) - *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (1994);

- Survey & Manage – *Record of Decision and Standards and Guidelines for Amendments to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (2001); and;
- Invasive Plants– *Pacific Northwest Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision* (2005).

Additional guidance for the project area is provided by the Mile Creeks Watershed Analysis (USDA Forest Service, 1994) 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, reduce stand density and fuel loads, provide for public and firefighter safety, and protect homes and other structures.

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 Forest Plan land allocations are Scenic Viewshed (B2) and Special Emphasis Watershed (B6). The goal for scenic viewsheds 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). A large portion of the project is located within the Dufur Mill Road (Road 44) viewshed. The Dufur Mill Road has a visual quality objective (VQO) of retention in the foreground and a VQO of partial retention in the middle ground and background (Forest Plan, Four-222). The goal for special emphasis watershed is to maintain or improve watershed, riparian and aquatic habitat conditions and water quality for municipal uses and/or long-term fish production. A secondary goal is to maintain a healthy forest condition through a variety of timber management practices (Forest Plan, Four-246).

The western boundary of the project area is part of Surveyor’s Ridge Late Successional Reserve (LSR), as designated by the Northwest Forest Plan. The eastern boundary of the project area is private land, and the Camp Baldwin Boy Scout Camp.

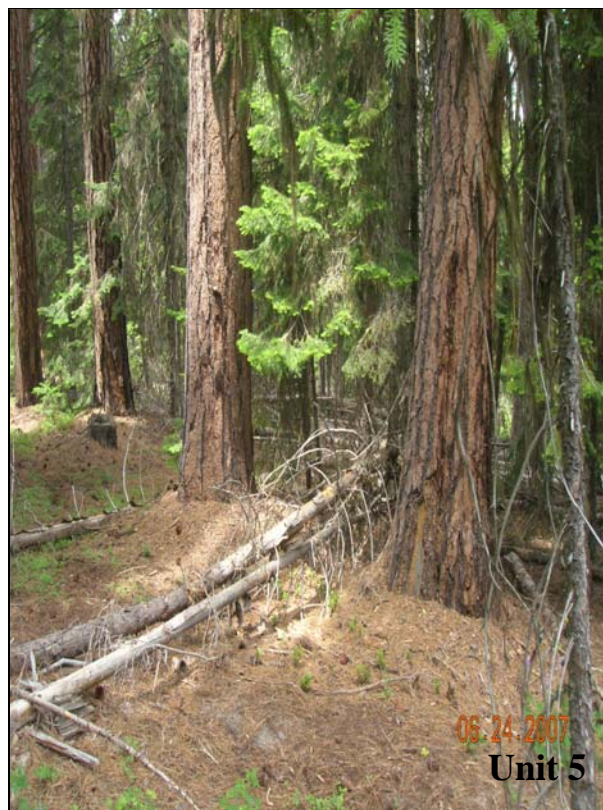


Figure 1-2: Existing Hazardous Fuels Condition for Billy Bob Planning Area

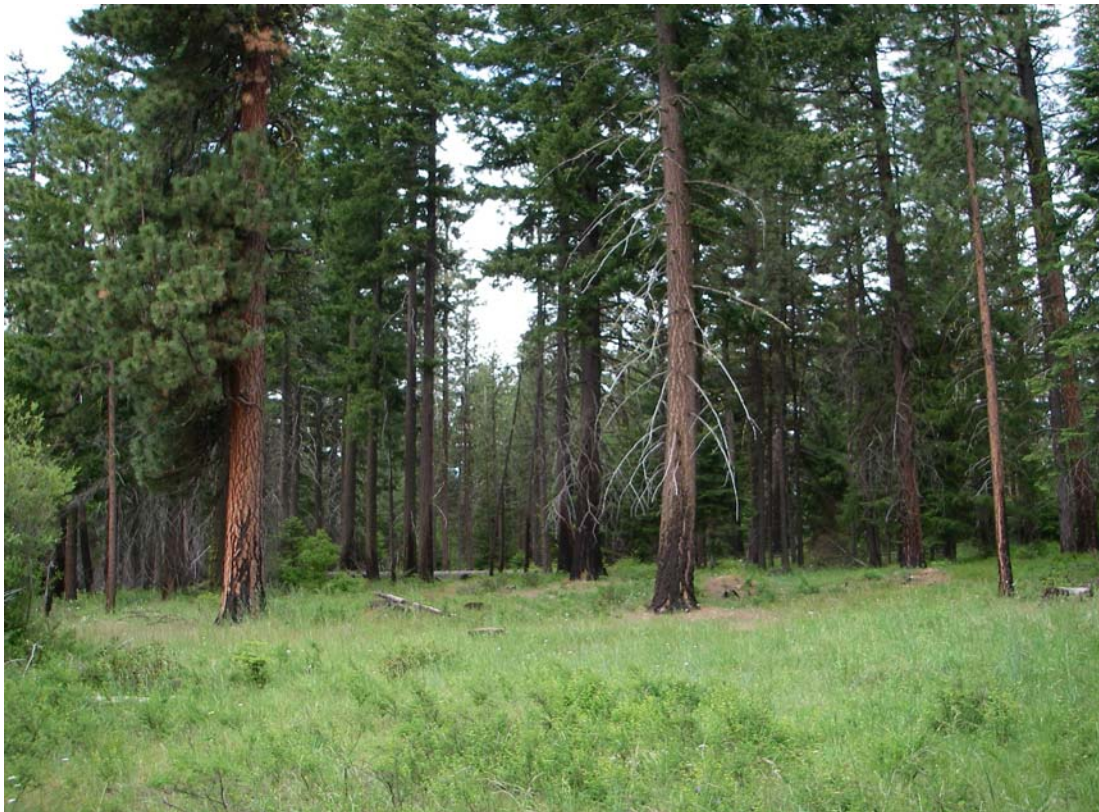


Figure 1-3: Desired Future Condition for Billy Bob Planning Area. Stands along the 44 Road that were commercially thinned and underburned in the mid-1990s.

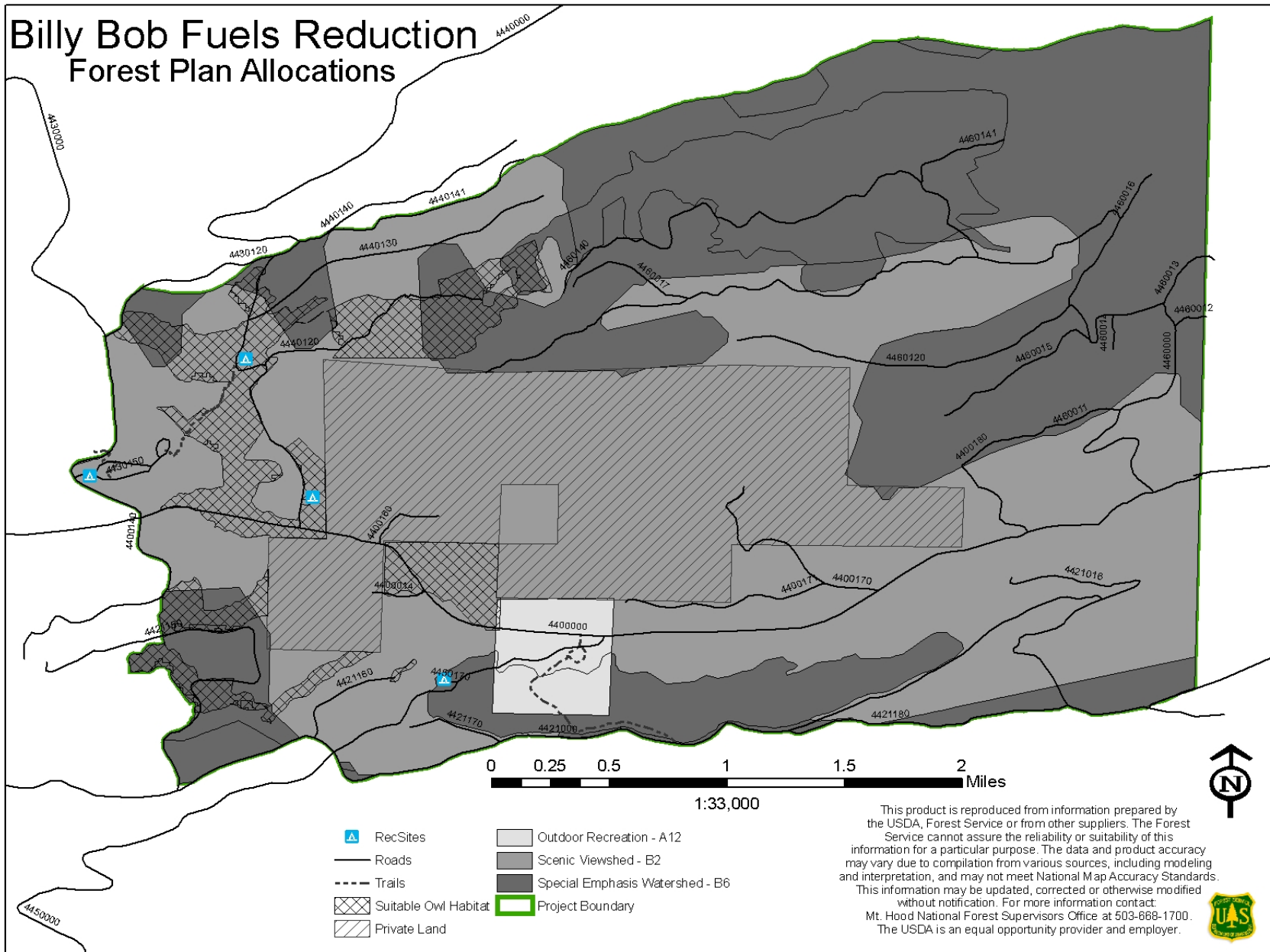


Figure 1-4: Mt. Hood Land and Resource Management Plan Land Allocation Map

Proposed Action

The Barlow District Ranger proposes to reduce hazardous fuels with mechanical treatments on approximately 1100 acres and underburn approximately 773 acres around the area of the Camp Baldwin Boy Scout Camp. The legal description for the project area is: T2S, R11E, Sections 1-4, and 8-16. Figure 1-1 displays the location of the proposed action. The project area was divided into treatment zones and Priority areas were developed for treatment based on where the Forest Service was to concentrate efforts depending on available funding. Priority area 1 is to be treated first for immediate protection of Camp Baldwin and adjacent private lands, with Priority area 2 as re-enforcement of treatments to priority 1.

The mechanical 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. A total of approximately 1100 acres would be treated by mechanical methods and up to 630 of these acres may be underburned in the future. The remaining acres occur in areas to the south and east of Camp Baldwin and underburning would maintain their current desirable condition.

Thinning from below for the purpose of hazardous fuels reduction means that smaller diameter trees growing in lower crown positions would be removed, leaving more space around remaining larger trees. To further reduce fuel loadings, trees would be selected for removal if their spacing facilitates the spread of a crown fire (canopy closure), or a tree form contributes to the initiation of a crown fire (crown base height) such as low growing tree branches over brush, which if ignited, could lead to crown fire initiation. Trees heavily infected with dwarf mistletoe would also be removed, since these trees contribute to ladder fuels (low hanging “brooms”), to low crown base height (distance from surface fuels to bottom of tree crowns), and to torching. Many trees with dwarf mistletoe would remain simply because they are the only structures (trees) to leave, and most of these would be girdled. Tall brush, which may contribute to the initiation of a crown fire, would also be reduced. Activity fuels (residue from mechanical treatments such as masticated material, thinning, etc.) as well as residual fuels from natural accumulation would be treated by piling and burning, to reach a target fuel loading of between 7 and 15 tons per acre. Stands where the dominant species and fire regime are appropriate, such as ponderosa pine and western larch in a low intensity, frequent fire return interval, would be treated so that future underburning could occur to maintain stand conditions. Variable density thinning would be completed as appropriate.

The stands proposed for fuel reduction would average 40 to 60 of the larger trees per acre after treatment. Canopy closure of remaining overstory would be 40 percent to 60 percent, depending on slope and the condition of potential trees to be retained within a stand. Achieving this canopy closure would be extremely difficult in many areas. The largest trees were removed from the entire project area many decades ago and the residual stands are heavily infected with dwarf mistletoe and most have pockets of root disease. It is unlikely that these stands would be in their present condition if fire had played its natural (sanitizing) role in this landscape. Fuel reduction activities within root disease pockets are likely to result in some patch openings. Stand density would vary with the availability of healthy leave trees. Some pruning of trees may occur in or around entrances and camping areas to the three campgrounds in the project area (Eight Mile and Lower Eight Mile Campground, and the Underhill site) after thinning activity fuels, to further reduce ladder fuels in the remaining overstory.

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 Billy Bob/Camp Baldwin area and if so:
- What mitigation measures and design criteria are needed.

Public Involvement

Collaboration

This project lies within an area identified in the Wasco County Community Wildfire Protection Plan (CWPP) as a high priority for treatment within the wildland-urban interface. The CWPP was prepared in a collaborative effort by individuals and agencies in Wasco County. In an effort to reduce the risk of wildfire as directed by CWPP, Camp Baldwin Boy Scout Camp has conducted fuels treatments within their property to ensure the safety of the campers during the summer months and to protect the structures. To further ensure the safety of the camps and success of the fuel treatments, Camp Baldwin requested that the Barlow District Ranger convene a collaborative group made up of individuals and agencies to identify specific projects within the Billy Bob planning area.

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

- On November 22, 2005, 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 around Camp Baldwin, Forest Service Road 44. 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 District also issued a press release announcing the meeting.
- Eleven people attended the first collaboration meeting held on December 13, 2005. This included representatives from federal and state agencies (USDA Forest Service, U.S. Fish & Wildlife Service), watershed councils (Wasco County Soil and Water Conservation District), environmental groups (Oregon Wild), private citizens, neighboring landowners (Camp Baldwin, Woodland Management Inc.), and recreational organizations (Columbia Gorge Power Sledders).
- Collaborative representatives met from December 2005 to March 2006 to identify projects to reduce the risk of wildfire around Camp Baldwin. The group recommended fuels reduction treatments that focus on thinning of dead, dying and diseased trees; removing ladder fuels; reducing crown density to a level that a crown fire could not be easily carry through the forest; and underburning. Other recommendations included plantation thinning, road decommissioning, and an educational outreach focused on the role of fire placed at the Underhill Site (an area near Camp Baldwin set aside for environmental education). The full text of the collaborative group's recommendations can be found in Appendix 1.

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 June 2007, a letter providing information and seeking public comment was mailed to 107 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), Bark, Mazamas, Woodland Management Inc., and one individual.

As required by HFRA, a public meeting was held on June 5, 2007 at the Barlow Ranger Station at Dufur, Oregon. The meeting was announced in *The Oregonian* as part of a legal notice of the public meeting and news releases were sent to *The Dalles Chronicle*. Five individuals attended the meeting: Oregon Wild, Woodland Management Inc., and three interested individuals. All attendees had participated in the collaborative working group.

A summary of the public comments received during the scoping period and public meeting are include in Appendix 2. This EA was finalized and published in September 2007 and made available to individuals and organizations who had indicated interest in the proposal. It is posted on the Forest website, under “Projects & Plans”: <http://www.fs.fed.us/r6/mthood/>.

Issues

Using the comments from the collaborative effort, the general public and other agencies, the interdisciplinary team developed a list of issues to address. Issues identified during scoping are normally addressed by developing alternatives to the proposed action; however, no alternatives are required for this HFRA project (see the alternative formulation section in Chapter 2). Instead, the project team considered all the comments received during collaboration and scoping and refined the proposal presented in Chapter 2 to address the following public issues:

- **Large Tree Retention**: All old growth characteristics and trees with older qualities (thick bark, yellowing bark, flat top, asymmetric crown, broken tops, forked tops, etc.) should be maintained.

Discussion of this issue can be found in Chapter 2 – Alternatives Considered, but Eliminated from Detailed Study and Chapter 3 – Vegetation Resources.

- **Temporary Roads**: Creating temporary roads may lead to resource damage, especially if these roads are not successfully obliterated upon completion of the project.

As required by the design criteria, new temporary roads would not exceed a total of 3-miles in the Billy Bob Planning Area. Also, 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.

- **Visual Quality**: The visual aspect of the Mt. Hood Forest seen from hiking trails is very

important to hikers. Visual quality objectives in the scenic viewshed of Dufur Mill Road as seen from Road 44 should be maintained.

Discussion of this issue can be found in Chapter 3 – Recreation and Trails and Chapter 3 – Visual Quality.