

**ENVIRONMENTAL ASSESSMENT**  
**FOR THE**  
**BOBBY CREEK RESEARCH NATURAL AREA MANAGEMENT PLAN**  
**EA # OR118-03-008**

U.S. DEPARTMENT OF INTERIOR  
BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT  
GLENDALE RESOURCE AREA

Responsible Official:

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BLM District Office

*EA #OR118-03-008 Bobby Creek RNA Plan EA*

# **Chapter 1 – Purpose and Need for Action**

## **1.0 Introduction**

The Glendale Resource Area proposes to implement the Bobby Creek Research Natural Area (RNA) plan as written in Appendix A. The RNA encompasses approximately 1,916 acres within the West Fork Cow Creek watershed. It is located 30 miles west of Glendale, Oregon in T32S, R09W, sections 2, 10, 11, 13, 14 and 15. See location map, Appendix B.

The Bobby Creek RNA was established in June 1995 to fill terrestrial element needs as listed in the Oregon Natural Heritage plan. The guiding principal of RNA management is to allow ecological and physical processes to dominate while preventing human-induced encroachments, including activities that directly or indirectly modify ecological processes in the area (BLM Manual Supplement 1623, 1987). Natural processes govern the management of the RNA and human intervention occurs only when a unique component is at risk.

The Medford District Record of Decision and Resource Management Plan directs the BLM to develop site-specific management plans to address such actions as land acquisition, use of prescribed fire, interpretation, introduced species, fire suppression, domestic grazing, insects and disease, public use, minerals, and hydrology (USDI BLM 1995, p.56).

## **1.1 Purpose and Need for the Proposal**

The purpose of the management plan is to (1) clarify the boundary and acreage of the RNA, (2) establish parameters of wildland fire suppression efforts to prevent special status species disturbance and land degradation in the RNA, (3) maintain the Oregon Natural Heritage Plan (ORNHP) Ecosystem Cells, for which the RNA was established, and (4) facilitate access through the RNA for research and monitoring. The trail would facilitate hiking in the very steep terrain as well as limit destruction to the landscape. The management plan is written in accordance with guidelines developed by the Pacific Northwest Interagency Natural Area Committee (1990) and is consistent with direction in the Medford District Bureau of Land Management Record of Decision and Resource Management Plan (1995). The project specific objectives proposed within this EA are to (1) allow natural processes govern special status species that occur in the RNA, (2) establish and maintain a fuel break along the RNA boundary, and (3) provide access for researchers in very steep terrain in a way that limits impacts to the RNA.

### **1.3 Relationship to Other Plans**

This environmental assessment tiers to the analysis leading to the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD)(USDI, USDA 2001) and the *Medford District Record of Decision and Resource Management Plan* (RMP) (USDI 1995), as amended. These documents are available at the Medford BLM office and the Medford BLM web site at <<http://www.or.blm.gov/Medford/>>.

### **1.4 Decisions to be made on this Analysis**

The Glendale Resource Area Field Manager will:

- 1) Select the Proposed Action or an alternative.
- 2) Determine whether the selected alternative would have significant effects or not, and whether or not to prepare an environmental impact statement. If the impacts are determined to be insignificant, then a Finding of No Significant Impact (FONSI) can be issued and a decision can be implemented.
- 3) Determine whether the selected alternative is consistent with the Resource Management Plan.

## Chapter 2 – Alternatives

### 2.0 Introduction

This chapter describes the alternatives under consideration. Descriptions focus on potential actions, outputs, and any related mitigation. This chapter also outlines specific project design features that are an essential part of the proposed action.

### 2.1 Alternative 1

The Glendale Resource Area proposes to implement the Bobby Creek Research Natural Area Management Plan (Appendix A) and to construct a 1-2 ft wide trail (see Appendix B, Trial Location Map). The 4.5 mile trail on contour would begin at the end of road 32-9-15.3 and connect with road 32-8-7. Trail construction is proposed to initially take place on a 1.5 mile section midslope in the eastern portion of the ACEC/RNA. This portion of the trail would provide access to at least one plant cell covered under Oregon Natural Heritage Plan. Extending the trail beyond the 1.5 mile length along the same contour is planned. Lengthening the trail would provide access to at least two more plant cells in the future.

The ridgeline along the RNA boundary would undergo fuels reduction treatments (RNA Management Plan, p. 17). The treatment units would extend approximately 150 ft of either side of the ridge from the top of the ridgeline boundary. First entry fuel treatments would occur over a multi-year implementation to treat the entire boundary. The area immediately adjacent to the Research Natural Area is Matrix. See Appendix B.

In the event of a wildfire, suppression activities would be primarily limited to hand line construction and water drops; retardant drops would be minimized and excluded from all waterways and riparian areas, and bulldozer activities would be prohibited (RNA Management Plan, p. 18). Retardant drops maybe used within the RNA under the following conditions (1) if fire fighter safety is a concern, (2) if wildfire would spread beyond the RNA, or (3) in order to limit or prevent a stand replacement fire.

#### 2.1.1 Project Design Features

Project Design Features (PDFs) are specific measures included in the design of the proposed action to minimize negative impacts on the human environment. Many project design features for projects in the Medford District are specified in the Resource Management Plan (RMP) under Best Management Practices (BMP) as described in Appendix D of the RMP (USDI BLM p. 152-165).

#### Air Quality

All prescribed burning would comply with the guidelines established by the Oregon Smoke Management Plan (OSMP) and the Visibility Protection Plan. In compliance with the Oregon Smoke Management Plan, any prescribed burning activities require pre-burn registration of all prescribed burn locations with the Oregon State Forester. Registration includes specific location,

size of burn, topographic and fuel characteristics. Advisories or restrictions are provided by the State Forester on a daily basis concerning smoke management and air quality conditions.

Prescribed burns would be conducted within the limits of a Burn Plan which describes prescription parameters so that acceptable and desired effects are obtained. Individuals interested in being notified when proposed prescribe burning would occur need to contact the Glendale Resource Area BLM.

## **Fuels Hazard Reduction**

### *Brushing*

Brushing would occur only along ridgeline units on conifers less than 8 inches diameter at breast height (DBH) where wider spacing and 100% maintenance brushing is needed for reduction of ladder fuels and total fuels. Conifer leave trees would be selected on an 18 ft by 18 ft basis; hardwood spacing at approximately 25 ft by 25 ft spacing within 150 ft of the ridge. Trees to be cut would primarily be 7" DBH or less.

### *Hand piling and pile burning*

Fuels created by brushing would be treated by hand piling and burning. The purpose of hand piling and pile burning within ridgeline units is to reduce the fire and fuel hazard and maintain Bobby Creek as a Research Natural Area.

In these ridgeline units slash 2 ft. long and less than 7 ft. diameter breast height would be hand piled. Chainsaws may be utilized to reduce the size of the slash to sizes appropriate for hand piling. Maximum pile size would be approximately 8 ft in diameter by 8 ft in height. All piles would be covered with a 5 ft by 5 ft sheet of 4-mil polyethylene plastic. At least  $\frac{3}{4}$  of the piles' surface would be covered and the plastic would be anchored to preserve a dry ignition point. Slash piles would not be placed on logs, stumps, talus slopes, in roadways or in drainage ditches. Piles would not be placed within 10 ft of trees or within 25 ft of a unit boundary.

The density of resultant piles (# of piles/acre) would vary depending on the nature of the individual unit. Typically, the number of piles in a brushing unit is approximately 25-35 piles/acre with average spacing between each pile ranging from 30 ft - 40 ft.

Ignition of piles would be with drip torches or other hand held devices. Burning would be done in the fall/winter season after significant rainfall has occurred. "Significant rainfall" equals one inch in a 48 hour period, or a cumulative amount that wets the litter and duff layer and penetrated the minerals soil layer to  $\frac{1}{4}$  inch or more. These conditions would typically prevent the spread of fire outside the burning pile and minimize the risk of an escape. A prescribed burn plan would be prepared to address burning objectives and operational concerns. Prescribed burn plans include weather parameters and design features to diminish any potential of fire escape.

### *Mechanical Treatment*

A mechanical rotary brush clearer would be used to shred and clear live vegetation along fuels hazard reduction ridgeline units. Residual conifer spacing would be the same as for brushing, approximately 18 ft x 18 ft or 16 ft x 16 ft and hardwoods at 25 ft x 25 ft. The selection of conifer spacing would be dependent on stand age and stand development. This treatment would not be used where the slope is 50 percent or greater and may be used in portions of ridgeline units and roads. Where only a portion of the ridgeline units can be treated by mechanical means, the rest of the unit will be treated using manual methods and chainsaw.

Slash would be treated in those stands or portions of stands where fuel hazard and risk assessments indicate the need for it. Assessments for fuels treatments considers hazard, risk and values at risk.

Hazard is defined by a fire's ability to spread and thus the fire's resistance to control once a wildfire has ignited. Hazard is rated using a numerical points system for each of the following factors: Slope, Aspect, and Position on Slope, Adjacent Fuel Model, Ladder Fuels and estimated fuel loadings following the thinning/brushing treatments. A points summary is then calculated and a rating of high, moderate or low is assigned.

Risk is defined as the source of ignition. A rating of high, moderate or low is assigned based on human presence and use and on lightning occurrence.

Values at risk are based on a consideration of human and resource values within planning areas. Conditions considered include land allocation, special use areas, human improvements/monetary investment, residential areas, agricultural use, structures present, soil vegetative conditions and wildlife habitat. This assessment ranks the values at risk in a unit at high, moderate or low.

In 2001 an initial fuel hazard and risk assessment of the ridgeline presented the probable need for fuels hazard reduction to maintain Bobby Creek. The fuel treatments proposed in the EA are based on this initial assessment. The ridgeline boundary would be reassessed prior to the implementation of any treatments. It is anticipated some areas where slash would be created would not be treated. Available funding for such work would be a factor determining the extent of treatment that would occur.

### **Special Status Plants**

Special status plant surveys were completed in spring 2003 for 1.5 miles of the proposed 4.5 mile trail. The remaining 3 miles of trail would be surveyed for special status plants prior to the construction of this portion. Botany surveys for ridgeline treatment units would be completed in the spring & fall of each year that fuels treatments would occur, prior to implementation. Identified BLM special status plants locations would be buffered per the current management recommendations. No brushing or fuels treatment work would occur within the buffers.

## **Wildlife**

Piles would not be burned within 50 feet of the drip line of trees with confirmed active red tree vole nests. Chainsaw activity would not take place within 1/4 mile of known spotted owl nests.

## **Cultural Resources**

Cultural surveys were completed in spring 2003 for 1.5 miles of the proposed 4.5 mile trail. The remaining 3 miles of trail would be surveyed for cultural resources prior to the construction of this portion. Cultural surveys for the proposed ridgeline fuels units would be completed prior to implementation. If any cultural sites are located within the trail construction area or the ridgeline fuels units, they would be protected by avoidance or by buffering.

## **Trail Construction**

In order to construct 4.5 miles of trail, trees less than 7 inches diameter at breast height in direct path of the trail would be cut during trail construction. No downed trees would be removed from the site during trail construction or maintenance.

### **2.3 Alternative 2**

Implement Bobby Creek Research Natural Area Management Plan as written in Appendix A. In alternative 2, trail construction would not occur, but ridgeline fuels treatments would reflect those mentioned in Alternative 1.

In the event of a wildfire, minimal firefighting tactics would be employed as mentioned in Alt. 1.

### **2.4 Alternative 3 – No Action**

Under this alternative, the management actions described under the alternatives would not take place at this time. There would be no change in current management under this alternative. The BLM could reconsider a management plan for the Bobby Creek RNA/ACEC in a future analysis document.

# Chapter 3 – Affected Environment and Environmental Consequences

## 3.0 Affected Environment

The affected environment is described in the Bobby Creek Research Natural Area Management Plan, attached at the end of this environmental assessment. This section describes the relevant resource components of the existing environment and also provides the scientific and analytic basis for the alternative comparisons in Chapter 2. Only substantive site specific environmental changes that would result from implementing the proposed action or alternatives are discussed in this chapter. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to that component and found the proposed action or alternatives would have minimal or no effects.

**Table 3-1 Critical Elements by Alternative .** The following elements of the human environment are subject to requirements specified in statute, regulation, or executive order and must be considered in all EAs (BLM NEPA Handbook [H-1790-1]).

Resource or Issue Affected by Alternative	Alternative (Y or N)			Resource Affected by Alternative	Alternative (Y or N)		
	1	2	3		1	2	3
Air Quality	Y	Y	N	Threatened & Endangered Species	Y	Y	Y
Area of Critical Environmental Concern (ACEC)	Y	Y	Y	Wastes, Hazardous/Solid	N	N	N
Cultural	N	N	N	Water Quality	N	N	N
Farmlands, Prime/Unique	N	N	N	Riparian Zones	N	N	N
Flood plains	N	N	N	Wild & Scenic Rivers	N	N	N
Native American Religious Concerns	N	N	N	Wilderness	N	N	N
Invasive Species	Y	Y	N	*Survey and Manage	N	N	N
Energy	N	N	N				

(Y) = yes, the resource is present and affected. (N) = the resource is not present or affected

\*Non-Critical Element

## 3.2 Direct and Indirect Effects

### 3.2.1 Alternative 1

#### Vegetation

In the event Survey and Manage and/or Bureau Sensitive species occur within the proposed trail route, the trail would be re-routed to allow a 5 foot distance between the closest path edge and

the plant site. This project does not present a threat to *Fritillaria gentneri*, *Limnanthes floccosa* var. *grandiflora*, and *Lomatium cookii*, as the project area is out of range and habitat for each species.

In addressing the fuels treatments involved in the proposed action, direct and indirect effects vary. Initial ridgeline treatments may remove local vegetation subpopulations, which constitutes a negative direct effect. However, reducing fuel loads along the east and south-east to south-west ridgelines would decrease the chances of a catastrophic fire in the future.

The Bobby Creek RNA is within the natural range of Port-Orford-cedar. However, the nearest known location of Port-Orford-cedar is at the confluence of Bobby Creek and West Fork Cow Creek, which is below the lower boundary of the RNA. The population at the confluence of Bobby Creek and West Fork Cow Creek is currently infested with Port-Orford-cedar root disease. If POC is found during implementation, protective guidelines current at the time of action would be applied.

### **Wildlife**

Impacts to wildlife species as a result of trail construction would be minimal, given that the width of the proposed trail is only 1-2 ft, and no large trees (greater than 7" dbh) would be felled. There is a small risk that the prescribed fire within fuel units could escape thus threaten the RNA. Fuels treatments would reduce the vertical fuel ladders and overstocked conditions. Since upper elevations experience a greater risk of catastrophic fire due to lightning strikes, fuel treatments would result in a decreased threat of stand-replacement fire to the RNA and wildlife species. One such species, the threatened northern spotted owl depends on these late-successional habitats to persist.

### **Soils**

The soils on the ridge tops surrounding the RNA are primarily identified as Acker Norling complex having slopes of 30 to 60 percent. These soils have a fairly high rock fragment content. Mechanical rotary brush clearing is not likely to cause compaction or increase erosion potential of these soils. The machine operates in a forward clearing manner by which it travels over the mulch resulting from the brush clearing thus protecting against soil disturbance and compaction. Little if any impact to the soils is anticipated.

### **Fuels**

Ridgeline Fuel treatments would decrease stand densities and fuel ladders thus reducing the chance of more acres burning in a high intensity fires within the Bobby Creek project area. Since upper elevations experience a greater risk of catastrophic fire due to lightning strikes, fuel treatments would result in a decreased threat of stand-replacement fire to the RNA. Since fuel treatments would occur during the winter and/or spring months the likelihood of prescribed fire escaping fuel units is very minimal.

### **3.2.2 Alternative 2**

#### **Vegetation**

Direct and indirect effects of Alternative 2 are similar to those described under Alt. 1.

#### **Wildlife**

Fuels treatment effects would be similar to those described in Alternative 1.

#### **Soils**

Little if any impact to the soils is anticipated as in Alternative 1.

### **3.2.3 Alternative 3 - No Action**

#### **Vegetation**

Under the no action alternative, direct and indirect effects to existing vegetation vary. Initially, the result of the no action alternative is little to no disturbance. However, from a fuels standpoint in particular, there is a fallacy in assuming this benefits vegetation. If ridgeline fuels treatments do not occur, the catastrophic fire potential increases, lessening the likelihood of species survival.

#### **Wildlife**

Under the no action alternative, as a result of providing no fuels treatments on the western ridges of the RNA, it is expected that high stand densities and increasing ladder fuels will heighten the risk of catastrophic wildfire, and thus threaten the RNA's high quality late-successional habitats and the wildlife species, such as the northern spotted owl, which depend on them for persistence.

#### **Fuels**

The current trend of increasing stand density's within the RNA, attributes to the increased mortality of timber as well as increased surface and ladder fuels. With increasing stand densities and large accumulations of fuel; the probability of high intensity fires within Bobby Creek would increase. Fire fighter safety would continue to be an issue as well as the potential of resource damage.

Air quality would be impacted in the event of a large wildfire. Emissions from wildfires are significantly higher than from prescribed burning. The wildfires which occurred in southern Oregon in 1987 emitted as much particulate matter as all the burning that occurred within the state that year.

### **3.3 Cumulative Effects**

The proposed fuels treatments provide the opportunity to reduce the future risk to late-successional habitat and wildlife from catastrophic wildfires. The cumulative effect on the RNA would be relatively minor, but the actions would contribute to the long-term maintenance of unique late-successional habitat and would reduce the future risk of large-scale fires which could threaten the RNA.

Although difficult to quantify, there would be a cumulative effect from not implementing any of the action alternatives. The trail is expected to facilitate the ability to collect knowledge for better RNA and overall resource management. If the trail is not constructed this knowledge would not be as readily available.

### **3.4 Monitoring**

The RNA would be subject to the monitoring called for in the Bobby Creek Research Natural Area Management Plan (p.22-24).

## Chapter 4 – Persons and Agencies Consulted

**4.0** A legal advertisement will be placed in local newspapers to announce to the public that the Glendale Resource Area is requesting public comments on the proposed management plan. In addition, notification of this proposal will be sent to the Oregon Department of Fish and Wildlife, the Oregon Dept. of Forestry, county commissioners for the affected county, several environmental groups, and representatives of the timber industry to request their comments. These announcements will be made following completion of this environmental assessment and before a decision is made.

Changes in the management plan may be based, in part, on information received from the public. The Field Manager will consider all input before making a final decision concerning this proposal.

### 4.1 List of Preparers

<u>Name</u>	<u>Primary Responsibility</u>
Rachel Showalter	Botany
Michael Bornstein	Wildlife
Natalie Simrell	Fuels
Amy Sobiech	Cultural Resources
Doug Stuart / Jim Brimble	Silviculture
Sherwood Tubman	NEPA
Loren Wittenberg	Soils/Hydrology
Michelle Kohns	NEPA

The Proposed Action has been screened for compliance with the Endangered Species Act, The American Indian Religious Freedom Act, Historic Preservation Act, Bureau of Land Management policies related to the ecosystem objectives and concepts in the Medford District Resource Management Plan (RMP) and with the Aquatic Conservation Strategy of the Northwest Forest Plan. Furthermore, this action has been screened from a landscape perspective and there are no effects anticipated from this action that would foreclose future management options in relation to the watershed management objectives identified through Watershed Analysis.

Comments, including names and street addresses of respondents, will be available for public review. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.



Sherwood Tubman

Ecosystem Planner

Reviewed for format and consistency

5/25/04  
Date

## References

BLM Manual Supplement 1623, 1987.

USDA Forest Service and USDI Bureau of Land Management. 1994a. Record of Decision for Amendments for Forests Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.

USDI BLM. 1995. Record of Decision and Resource Management Plan. Medford District Office, Medford, OR. 248 pp.

USDA and USDI. 2001. Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Forest Service/Bureau of Land Management. Portland, OR.