# Rabbit Mountain Fire LSR Recovery
# Environmental Assessment
DOI-BLM-OR-R050-2014-0004-EA
South River Field Office, Roseburg District
# Finding of No Significant Impact

*Overview*

The Rabbit Mountain Fire Late-Successional Reserve (LSR) Recovery project was designed to apply management direction from the 1995 Roseburg District *Record of Decision and Resource Management Plan* (ROD/RMP), which is tiered to the 1994 Roseburg District *Proposed Resource Management Plan/Environmental Impact statement* (PRMP/EIS).

In the early morning hours of July 26, 2013, a series of dry thunderstorms ignited numerous fires in southwest Douglas County and northern Josephine County, Oregon. Three of these fires formed what was known as the Douglas Complex—the Rabbit Mountain, Dad's Creek and Farmer Gulch fires, which burned 23,984; 24,439; and 248 acres, respectively. A total of 48,671 acres burned on federal and private forest lands, of which 6,266 acres were lands administered by the South River Field Office, Roseburg District BLM.

Burn severity within the Rabbit Mountain Fire perimeter ranged from low to high with varying degrees of mortality in stands, young and old, in proximity to roads, a railroad right-of-way and three active quarries. In many instances, this has led to circumstances where the safe use of the facilities by the BLM, private landowners, and the general public has been compromised.

The Rabbit Mountain Fire LSR Recovery Environmental Analysis (EA) considered a no action alternative (Alternative One) and one action alternative (Alternative Two). As described in the EA (pp. 22-26), Alternative Two – Proposed Action will apply roadside, railroad right-of-way, and quarry safety treatments to approximately 524 acres, roadside fuels reduction on up to 138 acres, habitat restoration on roughly 1,392 acres, and decommissioning of approximately three (3.0) miles of road within the Rabbit Mountain Fire LSR Recovery project area (EA, pp. 22-26). Gross acres are approximations based on post-fire aerial photo analysis, soil and vegetation burn severity models, and subsequent ground reconnaissance. Gross acres may change as additional information and further field review refines the approximations. *Appendix A – Maps* of the Rabbit Mountain Fire LSR Recovery EA displays treatment locations.

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Both context and intensity must be considered in determining significance of the environmental effects of agency action (40 CFR 1508.27):

*Context*

The project area is within the Lower Cow Creek, West Fork Cow Creek and Middle Cow Creek watersheds (EA, p. 1) within Douglas County, Oregon. All treatment areas are located on BLM-administered land allocated as LSR, interspersed with private lands, creating a mosaic of ownership patterns.

Alternative Two will treat up to 1,424 acres; approximately 0.5 percent of all lands in the project watersheds, and 1.3 percent of BLM-administered lands in the project watersheds. This will not bear any regional, statewide, national or international importance.

*Intensity*

The Council on Environmental Quality includes the following ten considerations for evaluating intensity.

1. *Impacts may be both beneficial and adverse. - 40 CFR 1508.27(b) (1)*

   Alternative Two can have potentially beneficial and adverse impacts, but it will not be significant as it will be consistent with the range and scope of those effects of natural resource management analyzed in the 1994 Roseburg PRMP/EIS, to which the EA is tiered.

   ***Beneficial Effects***

   *Forest Vegetation*

   The District will accelerate the development of conifer habitat, maintain structural legacy where it can be achieved safely, and limit roadside safety treatments to only those road segments subject to moderate- and high-severity fire, and where risks to federal and private woods workers and the recreating public may occur (EA, p. 78).

   Alternative Two will result in a more balanced proportion of hardwoods, shrubs and conifers. Such an affect will initiate a stand trajectory to attain the desired late-successional habitat characteristics described in the South Coast-North Klamath Late-Successional Reserve Assessment (USDA, USDI 1998, pp. 77-78). Planting varying proportions of fire-resilient conifer species such as ponderosa pine, sugar pine, incense-cedar, Port-Orford-cedar and Douglas-fir, based on site-specific conditions, will accelerate stand re-initiation and restore historical tree species composition. This will also place stands on a trajectory toward desired future conditions (ROD/RMP, p. 153) (EA, pp. 44-45). Planting conifers in areas that are removed from viable seed sources will help increase the likelihood and speed of conifer reestablishment in the area. These conifers, over time, can shade out enough of the underbrush to reduce the continuity of understory vegetation, reducing the potential of type conversion to hardwoods (EA, p. 53).

   *Fuels Management*

   Treatment of fuels less than 9 inches in diameter within 50 feet of the road edge will lower the risk of roadside, human-caused ignition by removing the fuels in the area most susceptible to human caused fires. The rocky nature of the project area will allow this roadside treatment to be effective for several years (EA, p. 53).

*Wildlife*

Habitat restoration will accelerate the transition from early-seral habitat to dispersal and nesting, roosting, foraging (NRF) habitat by 20-30 years (EA, p. 77). Fuels treatments will reduce the risk of roadside ignition and potential reburn in the area, and reduce the risk of further loss of habitat (EA, p. 75). Road decommissioning will benefit wildlife species by creating linear strips of early-seral habitat that will then transition through the various successional stages to potentially become/contribute to adjacent habitat values (EA, p. 74).

*Soils*

Planting conifers on 1,392 acres will accelerate the recovery of live vegetative ground cover to reduce soil erosion, with the subsequent addition of organic matter and litter to the soil and the addition of CWD over the long term as the forest regrows (EA, p. 96).

Some road decommissioning measures, including subsoiling, slash and topsoil/organic matter placement, waterbarring or road blocking, will improve the soil conditions as compaction of the roaded surfaces is and topsoil and organic matter accumulates on the decommissioned road beds (EA, p. 98).

*Aquatic Habitat and Water Resources*

A direct effect to pool quality can occur due to an increase in the amount of instream large wood expected as a result of directionally felling of hazard trees within the "no removal" riparian areas.

*Fish Species*

Directionally felling of hazard trees within the "no removal" riparian areas will increase the volume of instream large wood along Cow Creek and Middle Creek, which can increase habitat complexity and overwintering habitat for rearing salmonids (EA, p. 108).

***Adverse Effects***

*Forest Vegetation*

Where existing shrub or hardwood root systems are present and sprouting and recolonization is occurring, vegetation may be damaged as hazard trees are felled and removed and fuels reduction projects are implemented. Naturally regenerating conifer trees may also be affected during hazard tree felling and removal. However, post-fire studies from southwest Oregon have demonstrated that disruption of sprouting vegetation did not result in the loss of those shrub species from the sites or decrease the diversity of the developing plant communities (USDA, USDI 2014) (EA, p. 44).

*Endangered or Threatened Species*

Potential effects to species listed under the Endangered Species Act, and Critical Habitat designated for their survival and recovery are addressed below at consideration 9.

*Soils*

Project design features will limit the compaction of soils (EA, pp. 27-28). Where cable yarding may be employed to remove excess quantities of large wood, the amount of detrimental soil disturbance is estimated to be three to six percent (EA, p. 94). The amount of detrimental soil disturbance for ground-based treatment areas is estimated to be four to ten percent, consisting mainly of designated skid trails (EA, p. 95). The soil disturbance in the treatment areas from hazard tree felling, yarding and skidding will result in localized soil erosion. The surface soil disturbance will extend the initial vegetative recovery periods one to three additional years, depending on the site productivity, the amount of rock fragments in and on top of the soil, soil depth, and slope gradient. The PDFs will help initiate the recovery of these affected areas (EA, pp. 27-28).

The site productivity of any landings and skid trails will be affected longer term. Any treated areas of skid trails and landings with subsoiling, slash, and topsoil placement will help to start the soil recovery process, but does not restore soil properties completely. The soil fracturing is not 100 percent effective through the compacted soil profile, and only some topsoil is replaced onto the treated areas, with some slash placement, so a longer period is needed for full recovery of the compacted and displaced skid trails and landings (EA, p. 95).

2. *The degree to which the proposed action affects public health or safety. - 40 CFR 1508.27(b) (2)*

Alternative Two was primarily developed to address the issue of public health and safety along roads, a railroad right-of-way, and quarries due to the presence of fire-killed and fire-injured trees (EA, pp. 1-4). As a result, the implementation of hazard tree safety treatments along 12.6 miles of road, 0.5 miles of railroad right-of-way, and at three quarries is expected to reduce the risk to public health and safety (EA, pp.22-24), consistent with Oregon Occupational Safety and Health Administration (OSHA) provisions, and the "2008 Field Guide for Danger Tree Identification and Response" by Oregon OSHA, U.S. Forest Service, BLM, and Associated Oregon Loggers (EA, pp. 23, 26-27).

As described in the EA (p. 52), the project area is located in the Wildland Urban Interface as defined by the Douglas County Community Wildfire Protection Plans. Roadside fuels reduction actions will be undertaken to reduce roadside ignition and potential for severe fire behavior in the event an ignition occurs within these areas (EA, pp. 24-25).

3. *Unique characteristics such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. - 40 CFR 1508.27(b) (3)*

   Cultural resource inventories within the project area were completed as of June 13, 2014. Eighteen pedestrian surveys resulted in the identification of one historic mining shaft (OR-10-323) located approximately 200 feet or more upslope from any of the treatment areas (CRS No. SR1412, SR1405, SR1402, SR0114, SD9492, DW9301, 039304, 039207, 039102, 039008, 038818, 038816, 038806, 038801, 038719, 038703, 038614, 038514) (EA, p. 35). Any cultural resources inadvertently located during project implementation will be appropriately managed either through avoidance or mitigation. In this way, no cultural resources will be adversely affected by this project.

   As discussed in the EA (p. 16), the project area does not contain any Areas of Critical Environmental Concern, Research Natural Areas, prime or unique farmlands, parklands, Wilderness, or Wild and Scenic Rivers. No ecologically critical areas exist in proximity to any treatment areas.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial. - 40 CFR 1508.27(b) (4)*

   The environmental effects of the project are within the scope of those considered in the 1994 Roseburg District PRMP/EIS. The BLM has conducted natural resource management across western Oregon for decades. Effects are expected to be consistent with those of the published literature cited in the EA, and are not expected to be highly controversial, in a scientific sense.

   Public concerns and input have been considered throughout the analysis (EA, pp. 6-14). A notice of project initiation was published in the Roseburg District Quarterly Planning Update (Spring 2014), informing the general public of the nature of Alternative Two. Letters were sent to landowners with property adjacent to BLM-administered lands where hazard tree safety treatments are located, those whose property lies beside or astride identified haul routes, and those with registered surface water rights for domestic use located within one mile downstream of the project area. They were encouraged to share any concerns or special knowledge of the project area that they may have (EA, p. 13). None of the comments identified any scientific uncertainty regarding the project.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. - 40 CFR 1508.27(b) (5)*

   This project is not unique as the BLM has been conducting natural resource management for many decades. When professional experience is paired with the substantial body of literature on the subject, there is little uncertainty regarding the effects. The environmental consequences of all of the alternatives are fully analyzed in Chapter Three of the EA (pp. 37-120).

The actions analyzed in Alternative Two are routine in nature, which includes project design features (PDFs), best management practices (BMPs), and seasonal restrictions designed to address the potential effects identified in the analysis. These effects are well known and do not involve unique or unknown risk to the human environment.

Climate change and greenhouse gas emissions have been identified as an emerging resource concern by the Secretary of the Interior (Secretarial Order No. 3226; January 16, 2009), the OR/WA BLM State Director (IM-OR-2010-012, January 13, 2010), and by the general public through comments on recent project analyses.

The U.S. Geological Survey, in a May 14, 2008 memorandum (USDI USGS 2008) to the U.S. Fish and Wildlife Service, summarized the latest science on greenhouse gas emissions and concluded that it is currently beyond the scope of existing science to identify a specific source of greenhouse gas emissions or sequestration and designate it as the cause of specific climate impacts at a specific location.

As described (EA, pp. 118-120), Alternative Two will result in the direct release of carbon. Alternative Two will release approximately 0.5 tonnes per acre or about 262 tonnes of carbon over the 524 acres identified for hazard tree removal This carbon release will be undetectable at 0.00002 percent of current annual United States emissions estimated to be 1.7 billion tonnes and 0.000004 percent of projected annual global emissions of 6.8 billion tonnes (EA, p. 120).

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. - 40 CFR 1508.27(b) (6)*

   Alternative Two will implement a plan-level decision and does not establish precedent or a decision in principle about future actions. Any new proposals for natural resource management will be subject to site-specific evaluation and analysis.

7. *Whether the action is related to other actions with individually insignificant impacts but cumulatively significant impacts. - 40 CFR 1508.27(b) (7)*

   The interdisciplinary team considered Alternative Two in the context of past, present, and reasonably foreseeable actions (EA, pp. 37-38). As documented in the EA, no cumulatively significant effects to the following resources are predicted from implementation of the Alternative Two: Cultural and Historical Resources (EA, pp. 34-35); Botany (EA, p. 35); Noxious Weeds and Non-Native Invasive Plants (EA, p. 35); Recreation (EA, p. 35); Forest Vegetation (EA, p. 45); Fire and Fuels Management and Air Quality (EA, pp. 53-54); Wildlife (EA, pp. 83-84); Soils (EA, pp. 98-99); Fish, Aquatic Habitat and Water Resources (EA, pp. 114-115), Visual Resource Management (EA, p. 118), and Carbon Storage and Release (EA, p. 120).

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Historic Register or may cause loss or destruction of significant scientific, cultural, or historical resources. - 40 CFR 1508.27(b) (8)*

   As discussed above, cultural resource inventories within the project area were completed in 2014. Eighteen pedestrian surveys resulted in the identification of one historic mining shaft (OR-10-323) located approximately 200 feet or more upslope from any of the treatment areas (CRS No. SR1412, SR1405, SR1402, SR0114, SD9492, DW9301, 039304, 039207, 039102, 039008, 038818, 038816, 038806, 038801, 038719, 038703, 038614, 038514) (EA, p. 35).

   Any cultural resources located during project implementation will be appropriately managed either through avoidance or mitigation. In this way, no cultural resources will be adversely affected by this project.

9. *The degree to which an action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. - 40 CFR 1508.27(b) (9)*

   ***Botany***

   As described (EA, p. 35), activities have been determined to be non-habitat disturbing activities for all BLM OR/WA special status species. Therefore, there will be no direct effect on any of these species.

   ***Wildlife***

   In accordance with the Endangered Species Act, the BLM is in consultation with the U.S. Fish and Wildlife Service (USFWS) on the impacts of projects on northern spotted owl, marbled murrelet, and their critical habitats that may affect those species or critical habitats.

   *Northern Spotted Owl*

   As described (EA, p. 75), no effects from potential disturbance to nesting northern spotted owls or their young are anticipated because seasonal restrictions (EA, p. 30) will be applied where activities will occur. Effects will be solely associated with modification or removal of habitat. Effects to the northern spotted owl associated with modification or removal of dispersal habitat under Alternative Two will be consistent with those described in the Roseburg District PRMP/EIS (Chapter 4, pp. 62-65).

   Up to 96 acres of NRF and 6 acres of dispersal habitats will be treated and maintained; canopy cover loss due to the removal of single trees and small groups of trees is not expected to reduce canopy closure below the 60 and 40 percent thresholds for functioning NRF and dispersal habitats (EA, p. 78).

Up to 14 acres of NRF and 9 acres of dispersal habitats will be removed; canopy cover loss due to the removal of canopy closure below the 40 percent threshold is expected to occur for functioning NRF and dispersal habitats (EA, p. 78).

An additional 215 acres of capable habitat will be treated and maintained. Removal of suitable NRF habitat within one-quarter mile of known northern spotted owl sites or un-surveyed suitable habitat will be prohibited from March 1st to September 30th, both dates inclusive (EA, p. 30).

Planting will assist in insuring the timely regeneration of conifer habitat—accelerating attainment of canopy closure by 20-30 years and providing a more diverse assemblage of conifer species (EA, p. 77). Treatment areas will be replanted where adequate regeneration standards are not met, with a mixture of conifer species, weighted heavily to pines, incense-cedar, and Port-Orford-cedar, should post-treatment inspection identify the need to re-establish conifer species (EA, p. 75). Replanting will accelerate the transition from early seral habitat to dispersal and NRF habitat by 20-30 years (EA, p. 77).

*Marbled Murrelet*

There will be no effects to occupied marbled murrelet habitat due to actions of the projects. The majority of the hazard trees to be felled will be dead. Although hazard tree removal will not remove potential murrelet nest trees, the removal of hazard trees adjacent to potential nest trees and stands providing nesting will reduce canopy cover that provides vertical and horizontal cover that provides protection from predators and amelioration of environmental conditions. Hazard tree removal activities may occur outside of those defined areas, but will typically be single tree or small group removals. Within marbled murrelet nesting and recruitment habitats the felling and removal of dead trees will modify the habitat and may result in the loss of habitat function due to reduction in the overall canopy closure, and reduction of both vertical and horizontal cover (EA, p. 80).

***Fish Species***

Alternative Two will follow all provisions of the Clean Water Act (40 CFR Subchapter D) and Department of Environmental Quality's (DEQ's) provisions for maintenance of water quality standards. The actions taken under Alternative Two will have no effect to the federally threatened Oregon Coast coho salmon, Oregon Coast coho salmon Critical Habitat, or listed fish habitat (LFH[1]). Hazard trees will not be removed in close proximity to LFH and accordingly ground disturbance will not occur in close proximity

1 The Magnuson-Stevens Fishery Conservation and Management Act of 1996 (Federal Register 2002) designated essential fish habitat (EFH) for fish species of commercial importance. Essential fish habitat consists of streams and habitat currently or historically accessible to Oregon Coast Chinook and Oregon Coast coho salmon, and is coincident with Critical Habitat designated for Oregon Coast coho salmon in the Union Creek-Cow Creek, Middle Creek, Bear Creek-West Fork Cow Creek, and Riffle Creek-Cow Creek sub-watersheds. Essential fish habitat is also coincident for listed fish habitat (LFH) in the project area.

to Oregon Coast coho salmon or Critical Habitat because mechanized equipment will not be used in these "no removal" areas (EA, pp. 29-30). Where downhill yarding is required sediment controlling methods such as waterbarring furrowed areas (possible during log yarding) to distribute any concentrated flow, strategic hand piling of brush to filter out suspended sediment during heavy precipitation, or the use of straw wattles in yarding corridors can be used to eliminate sediment from reaching the stream network (Middle Creek and Cow Creek). A limited amount of moderate-high burn severity occurred in Oregon Coast coho salmon Critical Habitat portions of the project area (EA, Appendix A, Maps), and as such, there is a small potential for effects (i.e. warmer stream temperatures) from the fire to Oregon Coast coho salmon or Critical Habitat, and less yet from the safety treatment actions in these more intensely burned areas (EA, p. 109).

10. *Whether the action threatens a violation of Federal, State, or local law or requirement imposed for the protection of the environment. - 40 CFR 1508.27(b) (10)*

Alternative Two does not violate any known federal, state, or local law or requirement imposed for the protection of the environment. Alternative Two was designed in conformance with management direction from the Roseburg District Record of Decision and Resource Management Plan (ROD/RMP), which itself is in conformance with all applicable laws and regulations. Furthermore, the design features described within the EA ensure that Alternative Two complies with all applicable laws (ROD/RMP p. 5).

***Environmental Justice***

With respect to environmental justice, Alternative Two will be consistent with Executive Order 12898 which addresses Environmental Justice (EA, p. 16). No potential impacts to low-income or minority populations have been identified by the BLM internally or through public involvement.

***Native American Religious or Ceremonial Sites***

Correspondence with local Native American tribal governments has not identified any known unique or special resources in the project areas which provide religious, employment, subsistence or recreation opportunities (EA, p. 16).

***Noxious Weeds and Invasive Non-native Plants***

As per the required design features (EA, p. 16) and continued actions to contain, control and eradicate existing infestations as implemented under the Roseburg District Integrated Weed Control Plan (USDI BLM 1995b), Alternative Two will result in no perceptible difference in the establishment or spread of non-native plant populations from that expected under Alternative One.

Actions taken to contain, control and eradicate existing infestations are implemented under the Roseburg District Integrated Weed Control Plan (USDI BLM 1995b). These actions include inventory of infestations, assessment of risk for spread, and application of

control measures in areas where management activities will occur. Control measures will include release mowing, hand-pulling, and limited use of approved herbicides, where necessary (EA, p. 35).

*Finding*

Based on the analysis of potential environmental impacts contained in the EA, I have determined that Alternative Two will not have any significant impact on the human environment within the meaning of Section 102(2) (c) of the National Environmental Policy Act of 1969, and an environmental impact statement is not required. I have further determined that Alternative Two conforms to management direction from the Record of Decision and Resource Management Plan (ROD/RMP) for the Roseburg District, approved by the Oregon/Washington State Director on June 2, 1995.

11/24/2014

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Date