

**Box of Rocks Commercial Thinning and Density Management
Environmental Assessment
DOI-BLM-OR-R050-2010-0015-EA**

Bureau of Land Management, Roseburg District

Finding of No Significant Impact

Overview

The analysis area encompasses lands of the Roseburg District, Swiftwater Resource Area, Bureau of Land Management (BLM), located in the Rock Creek and Canton Creek 5th-field watersheds. Combined, these two watersheds drain an area of approximately 103,260 acres.

The locations of the commercial thinning and density management units are as follows:

- Matrix units in Sections 15, 23, 25 and 26 of T. 25 S., R. 1 W., Willamette Meridian (W.M.); and Sections 7, 11, 15, 17, 23, and 25 of T. 25 S., R. 2 W., W.M.
- Late-Successional Reserve units in Section 31 of T. 24 S., R. 1 W., W.M.; Sections 5, 6, 7, and 8 of T. 25 S., R. 1 W., W.M.; and Section 1 of T. 25 S., R. 2 W., W.M.

The Box of Rocks Commercial Thinning and Density Management Environmental Assessment (EA) analyzed two alternatives consisting of Alternative One - No Action (EA, p. 15) and Alternative Two – The Proposed Action (EA, pp. 15-26).

External scoping comments were received and considered. These comments, addressed in Chapter One of the EA (pp. 4-10), did not identify any issues that would have driven the development of other alternatives to the Proposed Action.

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

Context

As stated above, the two project watersheds, Rock Creek and Canton Creek, drain a combined area of approximately 103,260 acres. The Box of Rocks Commercial Thinning and Density Management project is a site-specific treatment of approximately 1,650 acres.

As this will be an intermediate treatment affecting only 1.6 percent of the combined watershed areas, it does 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)*

The Box of Rocks project will have positive impacts on the treated forest stands by improving tree health and vigor, enhancing commercial value of timber in the Matrix land use allocations, and accelerating development of late-successional conditions in the Late-Successional Reserve and Riparian Reserve land use allocations (EA, pp. 34-39).

Commercial thinning will provide timber for manufacturing which will provide employment and wages to timber workers and employees in associated industries, and generate tax revenues for local, state and federal governments.

These impacts are consistent with the range and scope of effects analyzed and described in the 1994 *Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement* (1994 PRMP/EIS, Chapter 4-88), which analyzed the timber management program for the Roseburg District.

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

The Box of Rocks project is a vegetation treatment that will not affect public health or safety because it will occur in a rural area in a landscape dominated by Federal and industrial forest land.

As described in the EA (pp. 26 and 78), fuel reduction treatments will be applied in the Wildland Urban Interface and Late-Successional Reserves to reduce and modify the arrangement of fuel loads. This will reduce risk of ignition, reduce rate of spread in the event of a fire start, and shorten the time necessary for containment and control.

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)*

As addressed in the EA (p. 26), there are no Areas of Critical Environmental Concern; prime farmlands; wetlands; wilderness; or wild and scenic rivers in proximity to the commercial thinning and density management units.

Cultural clearances have been completed on 26 of the 42 commercial thinning and density management units addressed in the EA. No resources of significant cultural or historical value were identified.

If surveys of the remaining 16 thinning units identify any cultural or historical resources, several options are available to address them. The first option will be to avoid the resources by reconfiguring unit boundaries or moving road locations. If this option is not viable the resources will be evaluated to determine their significance.

If it is determined that the resources are not significant, the project will proceed as proposed. If resources are determined to be significant, and avoidance is not an option, impacts will be mitigated. Development of a mitigation plan, which may include recovery of a portion of the cultural materials, will involve interested Tribal governments and the State Historic Preservation Office to determine appropriate measures to be taken.

- 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 BLM regularly conducts thinning and density management across western Oregon. There is a wide body of literature describing effects of such forest management activity. Effects are expected to be consistent with those published in literature cited in the EA and the analysis of effects contained in the Roseburg District 1995 PRMP/EIS. The effects are not expected to be highly controversial.

The public has had the opportunity to provide scoping comments and comments on numerous proposals similar to this one. No comments received indicated controversy over the nature of effects on the quality of the human environment.

- 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 regularly conducts these types of thinning projects. Based on professional experience and the substantial body of literature on the subject, there is little uncertainty regarding effects of the project. Direct, indirect and cumulative effects of all the alternatives are fully analyzed in Chapter Three of the EA (pp. 29-85).

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 in the EA (Table 3-11, p. 80; and Appendix E), the project will result in the direct release of carbon. The amount of carbon release will be undetectable relative to national and global emissions, and growth of remaining trees will sequester carbon equal to amounts released by thinning in a short interval of time. Based on modeling, enhanced growth of trees in the thinned stands will recapture and sequester the amount of carbon released within one year. Over the longer term (100 years) modeling estimates that the project will increase on-site carbon storage by 367 percent, compared to the present.

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)*

The advertisement, auction, and award of timber sale contracts that allow the commercial thinning of forest stands are common, well-established practices. This project does not set precedence for any future actions, nor represent any decision in principle about future considerations, as any new proposals for commercial thinning and density 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 the proposed action in the context of past, present, and reasonably foreseeable actions. No cumulatively significant effects to resources are predicted, as discussed in Chapter Three of the EA (pp. 29-85).

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 and in the EA (p. 82), cultural clearances have been completed on 26 of the 42 commercial thinning and density management units addressed in the EA. No resources of significant cultural or historical value have been identified.

If surveys of the remaining thinning units identify any cultural or historical resources, they will be dealt with as described above at # 3.

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)*

As illustrated in Figure B-1, *Appendix B – Wildlife* and described in the EA (p. 42), there are fourteen **northern spotted owl home ranges** overlapping the project area. Occupancy status of the 14 home ranges over the past five years is summarized in Table 3-7 of the EA (p.43).

No effect from noise disruption is expected because activities associated with the commercial thinning and density management project will occur outside minimum disruption distances for known and occupied northern spotted owl sites or unsurveyed suitable habitat, as established by the U.S. Fish and Wildlife Service, or be subject to seasonal restriction precluding activities during the critical nesting season from March 1st to July 15th to ensure spotted owls did not abandon nests or fledge prematurely. (EA, pp. 26 and 51)

Stands selected for thinning and density management are principally dispersal-only habitat for northern spotted owls because of the relatively small tree size (quadratic mean diameter from ~11 to ~18 inches) and relative high tree density (~138 to ~320 trees per acre). While there are scattered snags and larger remnant trees within of some of the units, they lack contact and interaction with the canopy of the mid-seral stands, making them unsuitable for nesting (EA, p. 42). Thinning will remove trees from the suppressed and intermediate canopy classes resulting in variable residual tree density and canopy closure, based on the marking prescription, and reduced vertical and horizontal cover.

Northern spotted owls are expected to continue to use these stands because post-treatment canopy cover will remain above 40 percent and the quadratic mean diameter of residual trees in the stands will exceed 11 inches, figures considered the threshold for dispersal function. Northern spotted owls will likely utilize thinned stands less than unthinned stands, however, until canopy cover returns to pre-project levels in 10-to-20 years.

As described in the EA (p. 43), the U.S. Fish and Wildlife Service has determined viability thresholds of 50 percent suitable habitat in the core area and 40 percent suitable habitat in the home range for determining whether timber management is or is not likely to have an adverse effect on northern spotted owls. Suitable habitat levels below these thresholds are thought to compromise reproductive success. Thinning in a 70-acre nest patch is considered likely to affect the reproductive success of nesting northern spotted owls (EA, p. 42). None of the commercial thinning and density management acres are located within a known northern spotted owl nest patch (EA, p. 42).

In a biological opinion (Tails #: 13420-2011-F-0012), the U.S. Fish and Wildlife Service found that the action proposed by the Box of Rocks analysis was likely to adversely affect the northern spotted owl based on: thinning in nest patches; thinning in core areas below the viability threshold of 50 percent suitable habitat; and road construction that removes suitable habitat from core areas and/or home ranges with less than 50 percent and 40 percent suitable habitat, respectively.

This finding was based on the proposed action represented in the biological assessment. Subsequent to its submission: units have been eliminated or modified to exclude thinning in nest patches; units have been eliminated or modified to exclude thinning in core areas below viability thresholds; roads have been eliminated or relocated to avoid removal of suitable habitat; and roads have been eliminated to avoid removal of dispersal habitat in core areas below viability thresholds.

With these changes, the effects of the project are expected to be substantially less than those identified in the biological opinion, and the potential for incidental take of northern spotted owls has been greatly reduced.

As discussed in the EA (p. 54), the project watersheds are within the range of **Kincaid's lupine** (*Lupinus sulphureus* ssp. *kincaidii*), a Federally-threatened herbaceous perennial plant. There will be no direct effect to Kincaid's lupine, as no populations have been identified in any of the thinning units comprising this project.

No effects on the Federally-Endangered **rough popcorn flower** (*Plagiobothrys hirtus*) are expected. While the project watersheds are in the geographic range of the species, habitat provided by vernal wet meadows is not present (EA, p. 54).

The Federally-threatened **Oregon Coast coho salmon** is present in the project watersheds (EA, p. 56). Critical Habitat for Oregon Coast coho salmon is present in Rock Creek, East Fork Rock Creek, North Fork East Fork Rock Creek, and an unnamed tributary to Rock Creek (EA, p. 56 and 59). Essential Fish Habitat for Oregon coast coho salmon is coincident with Oregon Coast coho salmon distribution and critical habitat (EA, p. 59).

Direct effects on fish from timber harvest and log hauling can result from the addition of fine sediment to streams (EA, pp. 64). Commercial thinning and density management will not have any direct effects on sediment load, however, as vegetated buffers greater than 33-feet have been shown as effective at trapping and storing sediment, and non-compacted forest soils in the Pacific Northwest have very high infiltration capacities and are not effective in transporting sediment overland by rain splash or sheet erosion. For the seven fish-bearing reaches that do border on thinning units, "no-treatment" areas a minimum of 60-foot wide have been established adjacent to the streams, which will be sufficient to prevent any direct effects from sediment (EA, p. 64).

Indirect effects from road construction, maintenance/renovation, timber hauling and road decommissioning could include reduced spawning success and egg and alevin survival where fine sediments reach streams and accumulate in gravels (EA, p. 64).

As discussed in the EA (p. 66), timber haul during the dry season will neither generate nor deliver road-derived sediment to live stream channels, as there is no mechanism for moving fine sediment from road surfaces into ditch lines and potentially into nearby stream channels, absent substantial precipitation. Additionally, absent surface flow, there is no mechanism by which intermittent streams will transport sediment downstream to fish bearing reaches.

There are three fish-bearing stream crossings on gravel roads along the haul routes. Timber haul during the wet season could contribute small amounts of fine sediment to stream channels. This will occur at a time of year that sediment is being transported downstream; however some small amount of sediment could become entrained in the spawning substrates, reducing quality of spawning habitat. In order to further reduce the potential for sediment reaching streams and being transported to fish bearing streams downstream, the following project design features will be applied (EA, p. 65):

- Active haul during the wet season will be suspended if the surface of the haul route becomes impacted.
- Straw bales, Terra tubes or similar sediment trapping devices will be placed in ditches above flowing streams if the ditch is observed carrying sediment-laden water.
- District fisheries and hydrology staff will monitor and inspect the haul route during use and make additional recommendations for sediment reduction.

For reasons discussed in the EA (pp. 67-68), it was concluded that the project will not adversely affect critical habitat for Oregon Coast coho salmon or Essential Fish Habitat for Oregon Coast coho salmon or Oregon Coast Chinook salmon.

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)*

The preferred alternative 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 the project complies with all applicable laws (ROD/RMP p. 5).

With respect to environmental justice, the preferred alternative is consistent with Executive Order 12898 which addresses Environmental Justice (EA, p. 27). No potential impacts to low-income or minority populations have been identified by the BLM internally or through public involvement. Employment associated with the sales will involve local contractors who engage in similar work throughout Douglas County.

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. 27).

As discussed in the EA (pp. 26 and 27), implementation of the Roseburg District *Integrated Weed Management Program*, in association with project design and contract provisions will minimize risk of introduction or spread of noxious weeds in association with road construction and timber harvest.

Measures will include mulching disturbed areas and seeding with native grasses to discourage establishment of new weed populations and pressure washing or steam cleaning logging and road construction equipment prior to move-in to avoid introducing weeds from outside the project area. These actions are consistent with the requirements of the Lacey Act; the Federal Noxious Weed Act of 1974, as amended; and Executive Order 13112, Invasive Species.

Based on the analysis of potential environmental impacts contained in the EA, I have determined that the project 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 the project 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.



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6/25/2012

Date