

REGIONAL ECOSYSTEM OFFICE

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MEMORANDUM

DATE: July 9, 2013

TO: John Huston, Cascades Resource Area Manager, Bureau of Land Management

FROM: Gerard J. Hubbard, REO Representative to the REIC

SUBJECT: Regional Ecosystem Office Review of the FY 2013 and 2014 Commercial Thinning Density Management Projects in Late Successional Reserves in the Cascades Resource Area

Summary: The Regional Ecosystem Office (REO) interagency Late-Successional Reserve (LSR) Work Group has concluded its review of the documents provided by the Cascades Resource Area of the Salem District of the Oregon and Washington Bureau of Land Management. The LSR Work group was asked to review 645 acres of proposed commercial density management projects in 40 to 60-year-old stands located in the Quartzville (LSR RO213) and Whitcomb (LSR RO212) Late Successional Reserves. The pertinent LSR Assessment (LSRA) that guides management of these LSRs is the Mid-Willamette LSRA. The REO, based upon review by the LSR Work Group, concurs with the Cascades Resource Area in its finding of consistency with the Standards and Guidelines (S&Gs) under the Northwest Forest Plan (NWFP) for the proposed commercial density management projects.

Basis for the Review: Silvicultural treatments in LSRs are subject to REO review under the Northwest Forest Plan Standards & Guidelines (NWFP S&Gs) (C-12-15). As required by the NWFP S&Gs (C-11), the Bureau of Land Management and the Forest Service jointly prepared the Mid-Willamette LSRA which encompasses the Quartzville and Whitcomb LSRs where the Crab Race and Mighty Moose projects are located. The LSRA was reviewed in 1998 by the REO and found consistent under the NWFP S&Gs (C-11). The Crab Race and Mighty Moose projects are not exempt from REO review under the LSRA and were thus brought to the LSR Work Group for review. Of particular importance, the Crab Race and Mighty Moose projects would require the cutting of some trees exceeding 20 inches diameter at breast height (dbh) in order to achieve the desired LSR objectives.

Background and Project Description: All of the stands in this proposal were clear cut logged and aerially seeded during the 1950s and 1960s and have been managed for timber production since establishment. Most of these stands have been pre-commercially thinned to even spacing. The stands consist of varying amounts of Douglas-fir, western hemlock, noble fir, and western

redcedar, and are located on high quality sites which exhibit rapid tree growth. Consequently, there is a good component of trees over 20 inches dbh. The stands are now in the closed mid seral stage with high canopy closures and poor understory development. Few large hard snags or down logs are present.

In order to meet LSR objectives and achieve the desired effects on stand structure and diversity, the Cascades Resource Area proposes to implement a variable density thinning and to create coarse woody debris. The treatments are designed to create desirable late-successional conditions, including diverse, multi-species, multi-layered stands with well-developed understories, increased growth of the leave trees, moderate to high accumulations of large logs and snags, and a moderate to high component of trees with physical imperfections. Some larger co-dominant and dominant trees would be removed to avoid concentrating tree removal in the understory. Removal of some larger Douglas-fir will better distribute the thinning treatment across canopy layers and crown classes, allow growing space for shade-tolerant species, and encourage establishment of understory vegetation in the canopy gaps. Desired late-successional conditions are not expected to be achieved in the foreseeable future without treatment.

Review of the Project: The LSR Work Group reviewed the Silviculture Prescriptions for the projects which are contained in the document titled, "Proposed Projects in Late Successional Reserves of the Cascades Resource Area, Salem District Bureau of Land Management Fiscal Years 2013 and 2014," dated February 12, 2013. The Work Group met with Cascades Resources Area staff on April 24, 2013. The LSR Work Group recommended the following changes or additions to the project:

- **Set an upper diameter limit of 22 to 24 inches dbh for harvest of large trees.**
Based on the stand exam data for Crab Race and Mighty Moose projects, the diameter limit has been set at 24 inches dbh. This will allow the cutting of some trees over 20 inches dbh to meet LSR objectives and reserve seventy-five percent or more of the larger trees in these stands.
- **Specify a maximum gap size in thinned areas.**
Maximum gap size would vary depending on target relative densities and leave tree diameters. Maximum gap sizes would vary from 17-33 feet between trees. Gap size information was incorporated into Appendix A of the document entitled "Proposed Projects in Late Successional Reserves of the Cascades Resource Area, Salem District Bureau of Land Management Fiscal Years 2013 and 2014".
- **Display a diameter distribution of trees before and after harvest.**
Diameter distributions of trees before and after treatment were calculated using Organon and incorporated into Appendix B of "Proposed Projects in Late Successional Reserves of the Cascades Resource Area, Salem District Bureau of Land Management Fiscal Years 2013 and 2014". Diameter distributions show an increase in diameter immediately after

treatment and in future years. Increase in the average diameter immediately after thinning show that we are thinning from below, removing smaller diameter classes and leaving larger diameter classes. Average diameters are also displayed in the stand tables for Crab Race and Mighty Moose on pages 10, 12-13 of this same document.

- **Document and discuss the effect of thinning on recruitment of dead wood through time.**

The effects of thinning on recruitment of dead wood through time are discussed at length in the Environmental Analysis for the Crab Race Project and the draft Environmental Analysis of the Mighty Moose Project. Included in the analyses are short term and long term effects, cumulative effects, watershed analysis recommendations and LSRA objectives for dead wood, proportion of treated versus untreated stands, and trade-offs of reduced dead wood versus increased diameter growth and an increase in stand complexity.

Conclusion: The Interagency REO LSR Work Group concurs with the assessment of the Cascades Resource Area that the 645 acres of proposed commercial thinning comprising the Crab Race and Mighty Moose projects are consistent with the LSR objectives if the included recommendations are implemented.



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REO Representative to the REIC

cc: Kim Titus, Salem District BLM
Michael Hampton, USFS
Kim Mellen-McLean, LSR Workgroup, FS

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