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Title:

Comments: Please accept the include PDF file as my submitted comments. Thank you.

Please consider these comments for the Grasshopper Restoration Project (#56470) Draft EA:

#### 1. Fuels Report

[middot] There is no discussion or mention of the 1994 Grasshopper fire<sup>1</sup> (page 2-74) which burned approximately 180 acres within the Grasshopper Restoration Project's project area in 1994. That fire burned through several of the current project's proposed units (particularly 95, 126, 127, 173, 182, & 184). This fire was only about 30 years ago so it is somewhat recent. It was also salvage logged (Grasshopper Salvage in 1995/1996) so did this not sufficiently reset the understory conditions in these project units as desired under this project's purpose & need?

[middot] The Project Area has had a number of previous thinning applications- 3 Conifer Project (Timber Sales Con 1-5, see attached), First Base 2 in 20202, Slide 15 in 20193 and 20204, Badger 45 in 20195 and 20206, and another pile thinning in 20207. While the Fuels Report acknowledges prior treatment activity within the project area, there is no discussion on why these previous treatments are now considered insufficient and require additional work. I would like to see the Forest Service discuss this issue and why the outcome for this project will be any different.

#### 2. Vegetation Report

[middot] The vegetation report also fails to identify and consider the 1994 Grasshopper fire in its cumulative impacts section.

[middot] From Page 3: [ldquo]Even aged stand conditions are typically defined as those where the ages of the trees are generally within about 20% of the average stand age. Even aged stands can be created though both artificial and natural disturbances. Plantation forests are the best example of even-aged stands, as often they are created using seedlings or clones from a common set of parents. The planted trees are all the same age since they are planted at the same time.[rdquo] Given that Alternative 2 includes Shelterwood Harvest (which removes 85% of the existing stand), how can the Forest Service justify this treatment? It will, in effect, create even aged stands. This is contrary to the stated purpose and need.

[middot] From Page 11: [ldquo]Ultimately, with no vegetation treatments, the stands would remain in dense overstocked conditions with little understory reinitiation[hellip].When stands develop in this manner, they become more susceptible to blow down in large groups.[rdquo] Why is this not considered understory reinitiation? It opens the canopy to more light and provides downed woody debris recruitment, all while retaining any stored carbon.

[middot] Why is stand age not included in Appendix B Vegetation Treatment Table? If canopy closure percentages can be included, so should stand age.

#### 3. Project Design Criteria

[middot] More specificity in the PDCs should be provided for silvicultural operations within the Inventoried Roadless Areas (IRAs). For example, how will thinned materials within the IRA will be moved around on site for placement in burn piles? Will this be done by hand? Mechanized means?

#### 4. Climate Change

[middot] In the summary on page 1, the Climate Change report claims that [ldquo]hellipActivities proposed by Alternative 1 (the [ldquo]Proposed Action[rdquo]) and Alternative 2 (the [ldquo]Shelterwood Alternative[rdquo]) would result in some carbon emissions and some carbon sequestration.[rdquo] Where is the evidence that the project would sequester any carbon? In the next two points, I will attempt to show how the project will only result in a negative carbon balance (and a sizeable one at that).

[middot] Hoover & Smith (2021)<sup>8</sup> found that west side Oregon forests store 128.6 tons of Carbon per hectare (51.95 tons / acre) and sequester an additional 1.66 tons per hectare (0.66 tons / acre) of additional carbon per year. Turner & Guzy (2004)<sup>9</sup> found that stands younger than 14 years of age had a negative carbon sequestration and Suchanek et al (2004)<sup>10</sup> found that stands younger than 20 years had negative carbon sequestration rates. Smith et al (2006)<sup>11</sup> and Gower et al (2006)<sup>12</sup> estimate that 46% of stored carbon is released back into the atmosphere as logging residue.

[middot] Assuming the release rate of 46%, the project[rsquo]s 3,858 acres will release 92,194 tons of carbon when logged and would not be able to sequester 51,054 tons of carbon during the next 20 years for a total loss of 143,248 tons of carbon. Conversely, if the project is not logged and allowed to continue to sequester carbon at an annual rate of 2,561 tons of carbon, the project acreage would sequester an additional 51,234 tons of carbon. This is a swing of 160,000 tons of carbon (+251,657 T/C for no action vs +91,194 T/C for either action alternative). I would argue that this would result in a significant regional impact.

#### 5. Northern Spotted Owl

[middot] The Wildlife Report states that either action alternative (1 or 2) would [ldquo]further reduce canopy cover and delay the attainment of suitable habitat by as much as 75 to 100 years[rdquo] but I can[rsquo]t see how this is not effectively a permanent impact rather than some sort of temporal impact. Previous projects such as the 3 Conifer project have degraded the existing NSO and prey habitat in the same manner as proposed here, and with the same likely claims of temporary degradation. Still- the Forest Service is going BACK into the same stands that were degraded twenty-some years ago and doing it all over. It appears to be an endless cycle with no patience to allow the habitat time to recover. This may be a thinning project but its ultimate impact is the same as clearcutting.

[middot] The discussion of RA-10 & RA-32 Habitat on page 10 is somewhat confusing. The definitions provided of both [ldquo]High value Spotted Owl Habitat[rdquo] (RA-10) and [ldquo]High Quality Spotted Owl Habitat[rdquo] (RA-32) appear to be the same and while the Forest Service says that RA-10 habitat will be maintained, it states that RA- 32 [ldquo]would be[rdquo] maintained. Has the Forest Service evaluated \*any\* of the proposed stands for preservation as RA-32 habitat? Appendix B lists 26 stands that are suitable NSO habitat: 3, 9, 141, 147, 148, 150, 157, 161, 163, 173, 184, 186, 187, 190, 191, 193, 193L, 201, 204, 206, 211, 213, 219, 220, 222, 223, 226, and 271. Have any of these stands been evaluated for preservation as RA-32 habitat?

[middot] Have there been any Survey & Manage Red Tree Vole surveys? Have any of the previously mentioned 26 units been surveyed for Red Tree Vole? The most recent Mt Hood National Forest project, Zigzag Integrated Resource Project, did survey for Red Tree Voles and included a summary of those efforts in the EA. The Mt Hood National Forest should be consistent in its project analysis, especially when critical habitat is present and part of the project area.

#### 6. Temporary Roads

[middot] The EA on page 9 says approximately 17 miles of temporary roads are anticipated. That[rsquo]s a pretty large number so it appears that the Forest Service has a pretty good idea of where these roads are proposed. Why are the locations not included? Other federal agencies such as the Bureau of Land Management are able to (and do) provide this information in their EA analysis.

References Cited in these Comments:

1. USDA Forest Service. [ldquo]Monitoring and Evaluation Report Fiscal Year 1998 Mount Hood National Forest Land and Resource Management Plan.[rdquo] 1999. (166p)  
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8. Hoover, C.M., Smith, J.E. Current aboveground live tree carbon stocks and annual net change in forests of conterminous United States. *Carbon Balance Manage* 16, 17 (2021). <https://doi.org/10.1186/s13021-021-00179-2>
9. Turner, D.P., Guzy, M., Lefsky, M.A., Ritts, W.D., Van Tuyl, S., Law, B.E. Monitoring Forest Carbon Sequestration with Remote Sensing and Carbon Cycle Modeling. *Environmental Management* Vol. 33, No. 4, pp. 457[ndash]466 (2004). [http://www.cof.orst.edu/cof/fs/turner/pdfs/turner\\_env\\_man\\_2004.pdf](http://www.cof.orst.edu/cof/fs/turner/pdfs/turner_env_man_2004.pdf)
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[https://www.researchgate.net/publication/273319184\\_Carbon\\_Dynamics\\_of\\_an\\_Old-growth\\_Forest](https://www.researchgate.net/publication/273319184_Carbon_Dynamics_of_an_Old-growth_Forest)
11. Smith, James & Heath, Linda & Skog, Kenneth & Birdsey, Richard. (2006). Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types of the United States. USDA General Technical Report NE-343. 2006. (223p) <https://www.fs.usda.gov/treearch/pubs/22954>
12. Gower, S.T., A. McKeon-Ruediger, A. Reitter, M. Bradley, D. Refkin, T. Tollefson, F.J. Souba, Jr., A. Taup, L. Embury-Williams, S. Schiavone, J. Weinbauer, A.C. Janetos, and R. Jarvis. 2006. Following the Paper Trail: The Impact of Magazine and Dimensional Lumber Production on Greenhouse Gas Emissions. Washington, D.C.: The H. John Heinz III Center for Science, Economics and the Environment. (Not Available Online)