The Friends of Douglas-fir National Monument is a non-profit organization that argues for the creation of a National Monument recognizing the historic, cultural and scientific importance of the Douglas-fir ecosystem of the Oregon Cascades. The proposed Calloway timber sale encompasses a portion of the southern edge of the proposed National Monument, so the details of the proposed Calloway sale are of great interest to the Friends.

A key element of the Friends' proposed National Monument is scientifically based thinning of the plantation stands within the area of the Monument, so one possible response to the request for comment on the proposed Calloway sale would be a favorable set of comments. There are, however, several gaps, or unanswered questions that require a different response.

The way the question is framed – whether the District Ranger should decide either that an environmental impact statement (EIS) is necessary or enter a finding of no significant impact – mandates that only one answer is possible: the District Ranger must commission an EIS to provide answers to the uncertainties in the EA, based on the numerous points where further analysis and discretionary decisions are called for.

From the beginning of the EA there is an acknowledgement that there are many decision points and evaluations that must be made as the process goes forward. The first paragraphs mention "what specific design criteria or mitigation measures are needed" and "what specific project monitoring requirements are needed to assure design criteria and mitigation measures are implemented and effective." Throughout the entire EA there are numerous additional elements mentioned where, if the proposed alternative (Alternative 2) is selected, there are additional inspections that must be made, there are analyses that must be carried out, and there are informed decisions that are yet to be made about each unit as it is prepared, and then logged.

Under normal circumstances the extensive number of unanswered questions would suggest that a finding of no significant impact would be premature, if not ill advised. Under the circumstances that have developed in the last months, creating a significant project that relies so much on a finding of no significant impact on subsequent evaluative decisions by several different Forest Service personnel who may no longer be employed in the McKenzie Ranger District is untenable. The EA, along with the probability of personnel layoffs and transfers, demonstrates that, if the project moves forward as planned there is no way to be assured that there will be no significant impact.

Doing a full EIS will give the District time to adjust to the scope of any personnel changes that may impact the District. It will also give the District time to plan alternative or mediation strategies to address the needs for allocated staff time that the EA lists in so many areas. The only way to be assured that the proposed thinning project will be successful in achieving its goals is to go through a more detailed analysis that adapts to changed circumstances.

At least one additional factor needs to be considered in the EIS. This issue is whether or not the proposed degree of thinning is the most effective means of improving the health of the forest without also increasing the risk of fires.

There is clear scientific evidence that timber management of any kind increases the risk and severity of fires. See Bradley, C. M., C. T. Hanson, and D. A. DellaSala. 2016. *Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States?* Ecosphere 7(10):e01492. https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1002/ecs2.1492 This is

especially true in Douglas-fir forests. See: Odion, D. C., E. J. Frost, J. R. Strittholt, H. Jiang, D. A. DellaSala, and M. A. Moritz. 2004. *Patterns of fire severity and forest conditions in the Klamath Mountains, northwestern California*. Conservation Biology 18:927–936.

Opening the canopy increases understory growth, which forms an important fuel load, which increases fire severity. See, e.g. Odion, D. C., and C. T. Hanson. 2006. Fire severity in conifer forests of the Sierra Nevada, California. Ecosystems 9:1177–1189; Odion, D. C., and C. T. Hanson. 2008. Fire severity in the Sierra Nevada revisited: conclusions robust to further analysis. Ecosystems 11:12–15.

There is thus a delicate balance between reducing the fire risk of crowded, single-species plantations and the increased fire risk of more open canopies. The EA does not acknowledge this balance, nor does it provide any rationale for selecting the degree of canopy reduction. The only allusion to these issues is the brief discussion with regard to the degree of thinning in multi-aged stands in certain units. The EA acknowledges that thinning will increase understory growth, but discusses this only with regard to the reduced need for future thinning: "Thinning heavily is effective in preventing the homogeneous dominance of a few understory species because the treatment ensures an uneven distribution of light and limits the need for additional thinning in the future."

Again, an EIS would allow this issue to be examined in sufficient detail to protect against a significant impact.

One issue that is unclear with regard to the degree of canopy loss is whether or not the drag corridors that inevitably will be created will be included in the canopy loss or whether this is an additional degree of canopy loss. If it is to be included, then this is another example of the ongoing and active inspection of each logging site that may not be possible after the personnel changes that are coming for the Forest Service.

The EA notes, with regard to more than twenty percent of the area of treatment that: "(t)hese effects of Alternative 2 of the Calloway Project, combined with the planned and ongoing projects, may affect and are likely to adversely affect northern spotted owl (NSO) critical habitat." The EA tries to minimize these adverse effects by saying that proper inspection will be needed to make sure that the loss is within the permitted losses, and points out that there may be medium or long terms benefits as thinned areas grow into potentially suitable habitat. Aside from being another example of the weakness of a finding of no significant impact in light of staffing changes, this concession is another demonstration of the need for an EIS. The problem is that all recent studies have shown that the number of NSO in the Pacific Northwest is declining rapidly, despite protections. The problem with any conclusion that there may be a short term adverse effect offset by a potential gain later is the question of whether there will be any owls left by the time the treated units regain supportive NSO characteristics. An EIS should address this issue.

One additional concern, is that there are multiple units within the project where the existing canopy is near fifty percent or less. (I.e. units 77 and 89). Given that these units are also among the steepest, and therefore most subject to damage during any logging, it would be best to eliminate these units (any unit where the canopy cover is already less than sixty percent) from the project.

Another concern is the value of the PCL clearances. These actions are included allegedly to improve the ability to resist future wildfires. The experience with recent fires, especially such fires as the Holiday Farm fire, shows that timber management of any type has no effect on the spread of the fire. Clearcut

areas, thinned areas, and plantations all were subject to the spread of the fire. In light of this, the value of the PCL is open to question, especially in those areas where, as the EA acknowledges, treatment will include many acres of NSO habitat. A more thorough examination of recent fire behavior should be carried out in an EIS before the PCL clearance is included in the project.

Conclusion

The overall goal of the project – thinning plantations – is supportable. However, given the probable or at least possible changes in the availability of District personnel to actually carry out the numerous further inspections and monitoring behavior assumed in the EA, a finding of no significant impact would be unsupported by the Environmental Assessment.