Data Submitted (UTC 11): 9/20/2024 4:00:00 AM
First name: James
Last name: Johnston
Organization:
Title:
Comments: To: Planning team, Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System

From: James Johnston, PhD

Re: Comments on the Amendments to Land Management Plans to Address Old-Growth Forests Across the National Forest System Draft Environmental Impact Statement Date: September 20, 2024

Thanks for the opportunity to comment on the Amendments to Land Management Plans to Address Old-Growth Forests Across the National Forest System Draft Environmental Impact Statement. I am an Assistant Research Professor at the University of Oregon who studies old-growth ecosystems throughout the western United States. My comments are most relevant to management of older conifer forests in the western US. I offer my affiliation with the University of Oregon to highlight my background and experience with this issue. The University of Oregon has not reviewed and does not endorse these comments.

Overall, I think the DEIS is taking the right approach. I believe it is appropriate and probably inevitable from the perspective of policy implementation to rely on local knowledge at the scale of individual national forests to define, identify, and develop conservation strategies for old trees. It's unfortunate that the 2012 NFMA planning rule did away with the Regional Guides that were required by the 1982 planning rule. Regional Guides would be well suited for development of specific, locally tailored direction for old tree conservation at the scale of national forests or aggregations of national forests found across a coherent geography (i.e., the Blue Mountains of Oregon, the southern Sierras of California, etc.). The Forest Service might consider development of mechanisms similar to the Regional Guides to define old trees, identify old trees, and provide guidance for conservation of old trees.

I offer several criticisms of the DEIS below that I think could be addressed in a final environmental impact statement.

First, I think the way the DEIS defines and discusses old growth as an operationalconcept needs to be refined. Much of the language that defines old growth is somewhat generic and does not fit all forests that are undeniably old-growth forests. For instance, the DEIS at p. 19 (Table 1) states that:

"Old-growth forest typically differs from other stages of stand development in a variety of characteristics, including the presence of old trees, variability in canopy structure, patchiness, and development pathways depending on disturbance regimes and resulting patterns."

Almost all forests have variability in canopy structure. "Patchiness" is non-specific, and not unique to older forests. I don't know exactly what is meant by "development pathways depending on disturbance regimes and resulting patterns," and this characterization is probably not unique or specific to old forests. More importantly, the statement from the DEIS quoted above seems to assume that all forests undergo predictable and stepwise stand development. In fact, many old forests (probably the majority of old forests in the western US as a proportion of total acreage) do not undergo predictable or stepwise succession from young to old forests or from less complex to more complex forests. Most extant old forests in the western US are uneven aged, seasonally dry forests with relatively low densities of old shade intolerant and drought and fire tolerant trees. Prior to the adoption of fire exclusion practices in the late 1800s and early 1900s, these forests were characterized by recurrent fire that truncated succession, resulting in marked discrepancies between edaphic and climatic

potential and typical biotic expression (Bond et al. 2005, Pyne 1982).

In fact, the only thing that reliably distinguishes an old growth tree is age. And the only thing that reliably distinguishes an old growth forest is the age of trees within the forest. This criticism is not academic[mdash]it has significant practical implications for conservation of old trees as I note below.

Second, I believe that additional direction that clarifies the role of existing forest planstandards and guidelines may be appropriate. The DEIS at p. 8 states:

"The proposal is not intended to replace existing direction in LMP but rather to add language that provides consistency across LMPs. If existing LMP direction provides more restrictive constraints on actions that may affect existing or potential old-growth forests, those more restrictive constraints would govern."

This direction raises an important question: What if the "restrictive constraints" salient to old trees that are found in existing forest plans are associated with negative impacts to old trees, old forests, and old forest function? For instance, amendments to forest plans in eastern Washington and eastern Oregon purport to protect old growth through a blanket prohibition on cutting of trees [ge]21 inches DBH. Numerous studies show that these sorts of blanket prohibitions, although undeniably "restrictive" and salient to old tree conservation, are deleterious to the conservation of old trees and restoration of forest resilience (Johnston et al. 2021, Johnston et al. 2018, Abella et al. 2006). Perhaps the Final EIS should be clear that only existing forest plan direction that demonstrably and reliably achieves conservation of old trees will govern old-growth protection.

Another related example: Many existing LMPs establish a network of designated old growth groves where management is significantly curtailed, which has negative impacts on dry old forest function.

Ideally, the Forest Service would inaugurate a regional mechanism for evaluating existing LMP direction akin to the old regional guides. This is particularly relevant given the DEIS's emphasis on adaptation to climate change. For instance, the DEIS at p. 21 (Table 1) instructs the Forest Service to:

"Engage in climate adaptation using explicit resistance, resilience, or transition approaches to address climate risks and achieve desired conditions, or otherwise intentionally accept alternative climate-driven outcomes."

Blindly adopting restrictive old growth requirements of decades old LMPs may not be compatible with successful climate change adaptation. Many existing LMPs do not even consider climate change as a significant issue.

Third, I believe the DEIS should clarify the role of forest restoration in conservation ofold forests, particularly seasonally dry, fire prone old forests. I think this statement from p. 16 of the DEIS introduces significant and unnecessary uncertainty about the role of forest stewardship/active management in conservation of dry forest old growth:

"Standard 2.a allows vegetation management to occur in areas currently meeting the definition (and associated criteria) of old-growth forest for the purposes of proactive stewardship. (See the Glossary for definition of vegetation management and proactive stewardship as these terms apply for the purposes of the proposed amendment and associated analysis.) There is no requirement that these areas continue to meet the definition of old-growth when managed for the purpose of proactive stewardship; however, the project-level analysis will need to demonstrate that the proactive stewardship promotes one or more of the conditions and/or characteristics listed in 2.a.i-xii. This is intentional as some vegetation management needed to achieve management objectives (e.g. hazardous fuels reduction, resilience to insect and disease, species composition, etc.) could result in an area no longer meeting the definition of old-growth immediately following vegetation management being completed but could result in the area being more resilient and adaptable to stressors and likely future environments - allowing the area to continue succession back towards old-growth forest."

Obviously, it is appropriate for a degraded old-growth forest system to meet the definition of an old-growth forest. For instance, many extant, seasonally dry, fire prone systems have seen extensive changes over the past 100 years including increasing forest density, shifts in species composition, and increased surface fuel loading that is resulting in accelerating mortality of old trees and uncharacteristic disturbance severity. But these are still old-growth forests with old-growth trees. Active management that restores resilient forest conditions should not result in these stands no longer meeting the definition of old growth at any spatial or temporal scale. Instead, characteristic old forest conditions are being restored.

To me, the language from the DEIS at p. 16 quoted above stems from a fundamental misapprehension about the nature of old forest systems in the western U.S. As noted above, most old forest systems in the interior western United States did not historically undergo a distinctive process of succession that resulted in a stepwise progression from young and simple to old and complex. The problems with the language of the DEIS highlighted in these comments result because the DEIS adopts a frame whereby all old forests have or should have significant canopy complexity, extensive live and dead biomass accumulation, etc., etc. This frame does not serve old forest conservation in all or even most cases. Instead, we should acknowledge that old trees and old forests are defined primarily by relative age, and that active management that restores characteristic forest conditions does not diminish but rather restores characteristic and desirable old forest conditions. This does not mean that passive management is not an appropriate and effective strategy for old-growth conservation in some cases. But active management is a critical part of conserving old trees, particularly in dry forests.

I think the DEIS needs to grapple with this inherent tension in old-growth conservation in a more explicit and deliberate fashion. I would recommend that the final EIS:

1. Create a practical definition of old growth that focuses strictly on the relative age of trees in stands.
2. Maintain the strategy of conserving old trees at the scale of individual national forests under the direction of existing or revised LMPs.
3. Provide additional clarification as to what existing LMP definitions of old growth are appropriate, what existing LMP guidance for old-growth conservation will be controlling, and what existing LMP guidance is amended and subsumed by guidance in the FEIS. Development of regional mechanisms for these evaluations and direction akin to the old regional guides may be appropriate.

Literature cited

Abella, S. R., Fule , P. Z., & Covington, W. W. (2006). Diameter caps for thinning southwestern ponderosa pine forests: viewpoints, effects, and tradeoffs. Journal of Forestry, 104(8), 407- 414.

Bond, W.J., Woodward, F.I., Midgley, G.F., 2005. The global distribution of ecosystems in a world without fire. New Phytol. 165, 525-537.

Johnston, J.D., S.M. Greenler, B.A. Miller, M.J. Reilly, A.A. Lindsay, and C.J. Dunn. 2021.

Diameter limits impede restoration of historical conditions in dry mixed-conifer forests of eastern Oregon, USA. Ecosphere 12(2):e03394.10.1002/ecs2.3394

Johnston, J.D., C.J. Dunn, M.J. Vernon, J.D. Bailey, B.A. Morrisette, and K. Morici. 2018. Restoring historical forest conditions in a diverse inland Pacific Northwest landscape. Ecosphere 9(8).

Pyne, S.J., 1982. Fire in America: A Cultural History of Wildland and Rural Fire. Princeton University Press, Princeton, NY.

ATTACHMENT: Johnston DEIS Comments.pdf - this is the same content that is coded in text box; it was originallyincluded as an attachment