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Comments: Comment on Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System #65356

This draft's Need for Change statements are commendable but the rest of the draft fails to describe significant changes to practices on the ground. I expect our local National Forest to suggest retaining a few more large trees per acre and to justify the same actions they do now for different reasons. This is not enough of a change to support ecological old-growth of the whole forest community of organisms.

The draft is designed for areas (to be designated) that do not currently meet the defined old-growth conditions. In order to understand this draft document and provide useful ("significant") comments, I used a thought experiment, applying its actions to my family's 250 acre forest tract in Indiana. It's a private forest but if it were part of a National Forest it would be a good candidate for a mature area designated to become old-growth, needing only a few more large trees per acre (40 years ago there was a selective harvest) and a few more decades to qualify.

In general, I suggest a less hands-on approach to development of old-growth. This draft describes a system that would apply revised silviculture standards to produce human-made old-growth conditions. Silviculture's basic assumptions treat the forest as a crop of trees. This draft's definition of old growth conditions relying solely on tree size, distribution and age is only partly useful. The definition's criteria are fairly easy to use to determine mature versus old-growth in the field but fail to account for the rest of the species in the forest. Trees alone do not comprise a forest. This fact is not simply a human emotion, there are plenty of studies illustrating the connectivity among forest organisms; plants, animals and microbes. An actual old-growth forest is a synergistic community greater than the sum of its species. A mature forest designated to become old-growth under the criteria of this draft must be handled carefully to allow for unexpected adaptive responses to our changing climate and weather conditions.

"Proactive stewardship" should be defined and limited. In most of the document the phrase "proactive stewardship" should be replaced with "stewardship". Our limited knowledge and understanding will likely never be detailed enough to produce blueprint-like designs that result in an ecologically functioning old-growth forest. No matter how much Indigenous knowledge and Western science we gather, the naturally occurring old-growth forest will contain surprises that cannot be controlled with proactive management. A better standard would be the Precautionary Principle, "first, do no harm." I agree with the need to proactively prevent harm. In Indiana, for example, the FS could have weighed in on the importance of including Bradford Pear in the recently passed state law prohibiting sale of invasive species. The FS remained silent as far as I know and the pears continue to proliferate without restriction working their way into all of our forests. At the same time, it is important to refrain from doing unintended harm. Every seasoned natural resource manager can remember a management action that unintentionally harmed the resource in some way.

Evidence of management's unanticipated results from my thought experiment: Our forest tract is adjacent to another tract in which a spider new to science has recently been identified. This was not unexpected since so many invertebrates have never been studied. I wonder what ecological niche that spider holds and how its behavior influences the rest of the litter community on the forest floor. A prescribed burn was conducted on another site adjacent to our forest tract causing me to wonder if spiders like that were affected, especially since the burn did not result in the expected mosaic but burned leaf litter off of virtually all the ground within its perimeter. The burn also failed to accomplish the desired outcome of releasing oak seedlings by eliminating brushy competition. My conclusion is that good stewardship includes refraining from unnecessary "proactive" activities.

Desired Condition 1: replace the word "improved" with the word increased.

Standards for Management Actions 2. (a) Vegetation management. Remove the word "proactive". Once a forest is mature and prioritized to become old-growth, proactive management should be confined to preventing harm.

The draft management actions should be revised to avoid interpreting them as a recipe for "gardening" the forest.

By gardening, I mean activities that transform the forest into a human-controlled landscape, an artificial assemblage of our favored species in places and quantities where we decide to put them. While we acknowledge that there is no place on earth unchanged by anthropogenic forces, we must not take this as an opportunity to go all out and over-manage our remaining older forests.

The rest of this paragraph listing the purposes of stewardship is too loosey goosey, allowing managers to imagine that they know what's best to garden up a forest with the specified number of large trees, snags and other unspecified structural components. The best way to retain old-growth is to refrain from cutting trees down. In a tree farm grown for economic sustainability, it's understandable for the forester to cull trees he determines to be unnecessary or imperfect. In an old-growth forest, the time scale of action to response is longer than most foresters' term of service. Old-growth foresters must be reluctant to alter natural processes by too-active management. Forest resilience is little understood. For example, well-meaning foresters in Indiana advocated for the prevention of Emerald Ash Borer damage by harvesting Ash, especially White Ash, prior to the arrival of EAB. In my family's forest tract, we decided against this advice and did not remove the Ash. Because of this decision, a few of the trees still thrive. Resistant trees like that are now being sought to provide grafting material for EAB resistance studies. This is an example of unexpected resilience. One of the important consequences of supporting old-growth is the opportunity for unanticipated useful knowledge about forest communities

Standards for Management Actions 2 (a) continued -- "necessary for the old-growth forest conditions to be resilient and adaptable to stressors and likely future environments" -- I interpret this standard to allow, for example, some but not all invasive species control. This makes sense to me but I don't anticipate agreeing with all the resulting specific FS actions. It's essential for the FS to become more responsive to public comment, recognizing that public stakeholders, including those of us whose stake is the forest's existence value rather than an economic or recreational interest in the forest. Professional foresters must not be the only people who control what happens in our public forests.

Standard 2 (a) i. proactively promote the "amount, density and distribution of old trees, downed logs, and standing snags" The draft standards must specify that trees must not be deadened by forest managers to meet the downed log and snag standards. Similarly, dead trees thought to be "excess" or imperfect must generally not be felled or removed. Unlike newly regenerating forests in disturbed or cut-over areas, thinning or culling the mature forests subject to these management actions would not hasten or improve the development of old-growth.

Standard 2 (a) ii through iv: vertical and horizontal distribution of old-growth structures, patch size characteristics, and patterns of disturbances -- It is often better to let these patterns develop without interference or control by management actions. Although a Forest Supervisor might contend that harvesting to make patches, structure, or disturbances might be "ecologically appropriate" as in Standards Management Action 3, it is not necessary to achieve the goal of increasing old-growth. Here in Indiana, we are experiencing an increased number of extreme weather winds annually that will serve the purpose of creating forest disturbances. Specific proposed site-specific management actions must be subject to public comment, these actions are NOT appropriate for categorical exclusions.

Standard 2 (a) v: appropriate fire -- Here in south central Indiana, physical evidence for widespread pre-settlement fires is lacking. The only convincing evidence I have encountered is from a village on the banks of the Ohio, a cultural milieu much different from the people who lived in or passed through the forest interior. Fire should be used judiciously and sparingly in these forests and not imagined as a ubiquitous tool. We should gently support the development of older forests, not garden the heck out of the place to create an artificial version of old-growth. Beware hubris! We don't know it all.

Standard 2 (a) vi: successional pathways and stand development -- I disagree that speeding up succession would be useful to get ahead of climate change or invasive species spread. For example, my family forests include an area that was planted to Pine over half a century ago for erosion control. Those trees are now mature and have begun to fall. The understory saplings are already poised to make a new canopy. Felling the trees ourselves would be likely to harm more than help successional development when one considers the impact of skid trails and inevitable (BMPs or not) proliferation of Stiltgrass. Although a Forest Supervisor might contend that harvesting Pines in a hardwood forest area might be "ecologically appropriate" as in Standards Management Action 3, it is not necessary to achieve the goal of increasing old-growth.

Standard 2 (a) viii: at-risk species -- care must be taken not to disrupt existing old-growth conditions when appropriate areas are available in mature forests. For example, in Indiana there's no advantage creating openings for Cerulean Warblers in existing old-growth or mature forest areas designated to become old growth because mature forests designated for timber management are also available and more suitable for this kind of management action. Once again, I urge a robust public comment process as a corrective factor for potentially over-eager and over-confident forest planners.

Standard 2 (a) x. key understory species or culturally significant species or values -- I would need some examples to address this standard. Could it be argued that Indiana's National Forest ought to reintroduce wolves or woods bison? Could a forest manager attempt to plant American Chestnut even with all the doubt about its provenance? There's a continuum between restoration/rehabilitation and gardening for an imagined "better than natural" forest. I understand writing a general standard that describes this continuum might be impossible. That's why it is so important to revise the trainings and evaluations of public involvement. I applaud the FS for finally formally including place-based Indigenous Knowledge and Western Science as appropriate decision-making tools. However, substantial improvements in actually taking the advice given by these and other sources must be made. At present, FS opinion about best practices appears to be parochial and dogmatic; without compromises shared among all stakeholders.