

Comment: There is nothing presented that is testing how this species can serve as a broader model for other forest tree species. There really is no conceptual model for this research. How does it all fit together? What overall hypotheses are you testing?

Response: The overall hypothesis or goal for the project is clearly states that effective management will increase value and utilization. The reviewer doesn't consider this as a basis for serving as a broader model for other forest species or as a conceptual model. Based on later comments, I suspect the reviewer prefers a biological-based statement for a hypothesis. This is developed later in the proposal, but the comment shows a need to communicate the biological basis for the work at the start which has been modified.

Comment: First, settle on whether this a region-wide (e.g., Northeast and Lake States) or range-wide project. As written, it feels more region-wide, so the Southern Appalachian efforts seems unintegrated.

Response: The goal is for a range-wide effort. I think the comment relates to submitted proposals that mentioned only northeastern states; other submitted proposals did include southern states, but these weren't listed. The information has been updated.

Comment: Lacking in clearly identifying ecological "drivers" of change; invasive species are highlighted, but climate change and land use change are barely mentioned.

Response: The ecological driver of change is the interaction of climate, stress agents, and the tree. All are mentioned in the proposal, but the communication is apparently lacking. "Climate-adapted management" or CAM is now identified and a focus for the proposal.

Comment: Third, the "market" analysis just does not fit. Its roll needs to be expanded to fully address the SOCIOeconomic impacts of the species range-wide (i.e., give economic, social and ecological drivers more equal weight).

Response: This aspect was not well explained in the original proposal. It has been added as a project objective with more support in the proposal.

Comment: I would suggest a much more tangible, comprehensive outcome for the project. This could be a large meta-analysis, review paper, or a "white pine workshop". The latter is my preference; I suspect that this is a renewal, so I believe there should be enough results already to provide a range-wide meeting for managers and scientists.

Response: The biological aspects have been reviewed and published in 2018 as part of a special issue in Forest Ecology and Management. Something similar can be done with eastern white pine management. There is RREA funding for a Eastern White Pine Management Symposium, now scheduled for March 2022 in Portland, Maine. As the reviewer states, this could be a large "meta-analysis" and will provide a tangible, comprehensive outcome for the project.

Comments: The complexity of a project, this large is my only significant reservation. Logistical nightmare of maintaining a plot network into perpetuity that includes 'demonstration', 'intensive measurement' and 'ecosystem services' forests and requires the expertise of entomologists, pathologists, silviculturalists, forest managers, ornithologists, statisticians, forest ecologists, carbon capture experts, etc. - does give me pause.

Response: The complexity and logistics also give me pause. However, the group has decided to request \$10 million from the USDA AFRI SAS program – such funding is necessary to make it possible to achieve the ambitious plans. I think the eastern white pine system is the one species where this ambitious approach is feasible.