

COMMENT BY CONNIE BARLOW, 26 June 2023 (3 pages in pdf)
Proposed rule: "Forest Service Functions"

Note: Connie Barlow has some publications on [Researchgate](#); she is the founder of [Torreya Guardians](#), and a [retired science writer](#) (4 books on evolution and ecology)

Thank you for extending the comment period. I am the founder (2005) of the citizen collaborative called Torreya Guardians. We are not a formal group, nor registered in any way, so I am filing this comment as a citizen.

My primary suggestion entails the need for "assisted range expansion" of dominant canopy trees. On a practical basis, this should be prioritized wherever replanting seeds or seedlings becomes a necessity in a national forest, owing to logging, canopy fires, or climate-induced deaths of vast acreages of trees, especially when it is clear that climate change is the root cause of stress in trees that are then killed secondarily by native insect pests or pathogens.

One mode of action for the U.S. Forest Service is to simply continue the already superb climate modelling that agency scientists have been doing for many years — and to keep finding ways to make the results more available and meaningful to the public. Overall, the most important agency activity may be to seriously ramp up the already excellent services staff are doing for encouraging and educating private and tribal forest owners to bring "climate adaptation" into their own forest plans and practices. As I live in Michigan, I am aware that the Northern Institute of Applied Climate Science (USFS collaboration with various universities in the Great Lakes region) provides a proven model for how this can be achieved. Within the past few years, the creation of Regional Climate Hubs within USDA is also a significant achievement. I myself have subscribed to the monthly newsletters of 3 of the 6 regions, and find the results very informative and easy to navigate. (Staff are terrific to communicate with, too.)

Overall, forestry professionals in the USA would certainly agree that educating the public about how 21st century changes in our understanding of forest ecologies is now markedly different from what we rightly assumed to be professional guidance in the 20th. That is, citizens and groups who regularly advocate for forest practices that prioritize ecological and biodiversity functions of forests should no longer ignore the site-specific impacts of ongoing climate change.

Thus, while it is still sensible for we conservationists to advocate for the protection of old growth forest acreage, when the time arrives that an old-growth stand suffers an unusual amount of mature tree death "caused" by a native pest or pathogen, then it is time to acknowledge that there will be no recovery and no return to "normal" and that it is the rapidity and severity of climate change that is the root cause.

Hands-off "management" for wilderness areas may still be advisable, but for forest acreage other than wilderness, it may be time to supplement salvage, thinning, or prescribed fire interventions with plantings that entail far more southerly genetics of the same canopy species and/or planting of canopy tree species whose historically native ranges are a fair distance to the south. "Assisted gene flow" poleward or "assisted range migration" are the terms generally used by forestry scientists to refer to these two distinct types of "assisted migration" forest practices.

Finally, I have some immediate "data" to support my sense that there is tremendous need for the agency to ramp up its climate-adaptation educational efforts, especially with existing local, regional, and national conservation organizations. My data is this:

Before I began writing this comment (June 26) I clicked over to viewing the comments that have already been filed. No matter what term I put into the "search" function, I could find no instance of a comment using any of the commonly used terms signifying active movement of species poleward. None of these terms brought up anything even close to the degree of advocacy I include in my comment. Terms I input: assisted, migrate, migration, range expansion, poleward, northward. None of these brought forth a comment similar to mine.

In contrast, I read a few comments by conservation organizations and found the emphasis still on solutions that were very good in the 20th century: mature groves, prevention of logging. It is surprising to me that conservationists still count "thinning" as off-limits, even though the kinds of forests for which "thinning" makes sense are vulnerable to drought precisely because of past human impacts that took them off the course of "natural" — that is failure to accept that occasional lightning or Indigenous ignited fires are the means by which massive acreage and canopy fires were "naturally" and "reciprocally" prevented.

Please regard this comment as having a great deal of basis in experience and scholarly reading. I co-created with a Canadian, in spring 2021, a new wikipedia page in which scholarly references prevail: "[Assisted migration of forests in North America](#)". As well, on the Torreya Guardians website (of which I am still webmaster) a link from the homepage goes to "Scholarly articles and news about assisted migration." That page is now enormous and clearly shows how much of the history of publications was led by USFS staff scientists.

Thank you for this opportunity to comment. Please continue your agency's leadership in the science and practice of climate adaptation.

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