

For Reference

Notes from the February 2019 Forest Service Environmental Assessment

The biggest deficiency throughout the 2019 E.A., is the absence of any positive statements regarding rhododendrons and kalmia whatsoever. The forest documents list no benefits of rhododendrons, not even scenic values. The benefits regarding erosion control on steep slopes, the habitat rhododendrons provide, the historical significance of rhododendron from the Southern Appalachia, and finally the throngs of visitors to the area just to experience these plants bloom. Missing from the assessment!

Excerpts from the USFS EA are below and a link to entire document is located here

https://www.fs.usda.gov/nfs/11558/www/nepa/104622_FSPLT3_4622719.pdf .

Bold face is added for emphasis. [Brackets are notes & comment]

Pg 16 Identifies the “need for the action” as being: ***“reduce understory shade tolerant plants”***

Pg 61: Identifies rhododendron and kalmia as shade-tolerant plants: “Understory and midstory vegetation is more abundant and shifting toward more shade tolerant species such as rhododendron, mountain laurel (*Kalmia latifolia*)” The purpose of the Action is repeated as *“reducing understory density of shade tolerant species”*.

MB [the idea that vegetation is “shifting” toward rhododendrons and kalmia implies a change to the understory found in Southern Appalachia, with the explanation being the lack of burning of these understory plants. This proposition is inconsistent with the discovery of numerous species within the Rhododendron genus, and *Kalmia latifolia*, throughout the forests in Southern Appalachia, literally a century before the area was ever a National Forest. The life span of some of these species -including many plants being targeted now for eradication- predate the US Forest Service now proposing for their demise.]

Pg63: Identifies 85% of the soil in the project area as being “fine sandy loam” With the slope for the majority of the terrain over a 30 degrees in the project of over 30%

The EA concludes without further review: “There would be no new effects to soil quality as a result of management activities”.

MB [Yet, the NCRS (also under the USDA) published a soil survey that shows these soils are easily eroded from such silviculture activities and require remediation. Further, the steep slopes and silty-loam soils upon which rhododendrons and kalmia thrive, help prevent soil erosion. These same sites will unlikely support full size “large mast trees”, and the proposed natural regeneration from acorns and seeds will likely result in continuous erosion until these sites are reestablished and 20-30years later as these larger trees fail to develop a large enough root system to support their weight. In Fact the best management practices for forestry discourage ‘Hard-mast” species from steep terrain, especially in the loamy soils in this area.]

Pg 70-71: The EA documents the “history of rhododendrons.”

*“Cove Ecozones Vegetation Structure: Most stands on the Nantahala National Forest in the rich and acidic cove ecozones are also 70-120 years old and exhibit an even-aged to two-aged structure (USDA-FS 2014). **The two cove ecozones are very similar but can be distinguished by the presence of rhododendron in the understory and midstory of the acidic cove ecozone, which also tends to have a greater shrub density overall (USDA-FS 2014). The density of rhododendron in these forests***

today is the result of soil conditions as well as land use history (USDA-FS 2014). After exploitive logging, the chestnut blight, and a fire exclusion period, rhododendron had the opportunity to expand beyond localized riparian patches and low densities where historical accounts have placed it (USDA-FS 2014). Just as rhododendron has expanded out of riparian zones and onto ridge tops and throughout north facing coves, the amount of acidic cove forests has likely increased since the 1900s (USDA-FS 2014)¹.

MB[this citation is to the USFS themselves, and may refer to an earlier E.A. in which the USFS makes a similar claim without citations and without scientific reference. It appears to be completely fabricated out of whole cloth! All other searches of the 2014 documents in the bibliography found nothing to support these claims.]

Pg 73-74: “The presence of rhododendron has a strong influence on forest structural development in the cove ecozones. In harvested stands from the late 1800s where fire has since occurred, trees were able to establish and grow ahead of the rhododendron, but in the absence of fire, dense rhododendron has shown that it can completely exclude most tree and herbaceous species from establishing (USDA-FS 2014). Where rhododendron densities are low to moderate, shade tolerant species such as eastern hemlock are able to grow up through it; unfortunately, this species has essentially been lost due to the hemlock wooly adelgid (USDA-FS 2014). The death of countless mature hemlock trees has contributed significant numbers of snags in many cove forests, and the canopy gaps are being overwhelmed by rhododendron, where it could become the climax species (USDA-FS 2014). Some mortality of older trees which are showing signs of decline would be expected in the near future. Stand compositions would continue to trend toward higher concentrations of shade tolerant, non-fire adapted species, conditions which are outside of the range of natural variation. Historical accounts place rhododendron in more localized patches along riparian corridors or present in low densities under the intense fire regime employed by Native Americans and early European settlers (USDA-FS 2014). pg 73-74

Pg 75 “Fire would help also reduce the density of rhododendron, providing more light to the midstory and favoring the growth and development of other plant species.”

Pg 76-77 Under “Recreation” “taking no action [not burning & spraying] would be a loss of recreational opportunities (such as hunting, fishing, and wildlife viewing) in the project area since there would be no new early successional habitat” ...“Indirect effects to recreation resources would result from differences in recreational opportunities associated with habitat change. Hunters would probably find the regenerated hardwood stands more suitable for ruffed grouse hunting than squirrel hunting following project completion. Bird watchers might be more likely to see or hear rufous-sided towhees, chestnut-sided warblers, and indigo buntings in the new early successional habitat following regeneration. Blackberries would increase in the regenerated stands while they remain in early successional habitat, with a resultant increase in berry picking opportunities. Habitat improvements would create new opportunities for wildlife viewing.”

Remarks [essentially the EA argues that undesirable rhododendrons are blocking the view-scape for some recreationalists, and also are obstacles to longer-range clear shots for hunters.]

¹ King, David I. and Scott Schlossberg. 2014. Synthesis of the conservation value of the early-successional stage in forests of eastern North America. *Forest Ecology and Management* 324:186-195. Labbe, Michelle A. and David I. King. 2014. The Effect of Local and Landscape-Level Characteristics on the Abundance of Forest Birds in Early-Successional Habitats during the Post-Fledging Season in Western Massachusetts. *PLoS ONE* 9(8): e106398. <https://doi.org/10.1371/journal.pone.0106398>

Pg 78 Under “Scenery”: “The use of herbicides post-harvest would not be visible because they are applied in dormant season so the vegetation change is not noticeable.” **“individual changes would not be noticeable to hikers within three growing seasons after harvest activities.” “cumulative effects would be minimal short-term changes to the scenery resources”.** MB [Once the rhodo stump rots, they will no longer be a blight on the forest landscape.]

“low fire intensity would not reduce the availability of [shrew]habitat because flames do not carry well in rhododendron thickets” pg 145

*“Due to aggressive wildfire suppression and ceasing of anthropological burning over the last 50 to 100 years, these fire adapted ecological zones have missed one or more fire return intervals and are departing from their natural species composition and condition. In the absence of fire disturbance, the vegetation of the ecological zones in the project area is generally increasing in density and canopy cover. Understory and midstory vegetation is more abundant and shifting toward more shade tolerant species such as rhododendron (*Rhododendron maximum*), mountain laurel (*Kalmia latifolia*), red maple (*Acer rubrum*), and eastern white pine (*Pinus strobus*). Regeneration of fire adapted species such as oak (*Quercus spp.*), hickory (*Carya spp.*), and shortleaf pine (*Pinus echinata*) is decreasing in sites that once supported it. Grasses, forbs and soft mast species are also becoming more limited. The desired condition of this project area is to promote the fire adapted ecosystems in terms of species, condition, and function.* pg 61 [The goal is again defined as *Reducing understory density of shade tolerant and fire intolerant species to allow for regeneration of native fire tolerant species*; pg 61]

Pg 158 Matt Bushman, Botanist, Nantahala National Forest

Page 196: response to questions about repeated burns and herbicide spraying. Sites 2 documents as justification for eradicating rhododendrons to minimize risk of fire.

“Mesic forests and riparian areas with dense rhododendron are unlikely to burn unless fire is forced into these areas during exceptionally dry periods.” Pg 19 . The same page praises the dense rhododendron thickets for providing habitat to endangered species.

- i. *Considerations for Wildlife & Fire in the Southern Blue Ridge* Nature conservancy
https://static1.squarespace.com/static/546cbcc7e4b06ce240c13156/t/5b31edb1352f53ec8162c417/1529998959248/Considerations-for-Wildlife-and-Fire_AWarwick-compressed+%281%29.pdf
- ii. *Restoration in the Southern Appalachians: A Dialogue among Scientists, Planners, and Land Managers* W.T. Rankin and Nancy Herbert, Editors (2014) [
- iii. King, D.I. and S. Schlossberg. 2014. *Synthesis of the conservation value of the early- successional stage in forests of eastern North America*. Forest Ecology and Management [From U-mass Amherst, discusses shrubs from the North East expanding from creek sides, but not specifically kalmia and rhodos, and the citation is completely irrelevant to the situation in Southern Appalachia]

Pg 198 *“The EA does propose the use of herbicides to accomplish management objectives. The majority of the treatments would be direct application of triclopyr to release crop trees including hard mast-producing species, primarily oaks and hickories, from being overtopped and smothered by vigorous sprouts of non-mast-producing species =...The main goal of the triclopyr release and vine treatments are to favor crop trees that, because of their relatively slower growth rates, would be outcompeted by other vegetation without intervention.”*

Remarks [here “non-mast producing species” includes rhododendron.]