



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

October 19, 2015

Mr. Thomas Schuler
Supervisory Research Forester
U.S. Department of Agriculture
Forest Service
Northern Research Station
459 North Nursery Bottom Road
Parsons, WV 26287

Re: Draft Environmental Impact Statement, 2016-2020 Fernow Experimental Forest, Tucker County West Virginia, 2015, CEQ #20150250

Dear Mr. Schuler:

In accordance with the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), the United States Environmental Protection Agency (EPA) has reviewed the 2016-2020 Fernow Experimental Forest Draft Environmental Impact Statement (DEIS). The USDA Forest Service, Northern Research Station (NRS) proposes to continue on-going long-term research activities on the Fernow Experimental Forest, Tucker County, WV over the next several years. The proposed action and alternatives in this DEIS were designed to implement directions contained in the 2011 Revised Forest Plan for the Monongahela National Forest, the NRS-01 Research Work Unit Description, and the individual research study plans. The purpose of this project is to continue long term research studies, and to manage the Fernow Experimental Forest for long-term research.

Three alternatives were assessed: the no action, proposed action, and modified proposed action (Alternative C). Alternative C is the preferred alternative, involves treatment on 160 acres, single tree selection on 113 acres, 31 acres of patch cutting, prescribed fire treatment on 398 acres, herbicide treatment of understory/midstory on 12 acres, and underplanting of hardwood seedlings on 6 acres. Other treatments include fertilization of 89 acres with ammonium sulfate fertilizer, (and additions of lime to 4 of those acres), herbicide treatment of invasive species, and maintenance of roads, decks, and other infrastructure.

While we understand that this is an ongoing effort and the importance of research, additional information should be provided about the status of each of the research projects, the time frame that each project has been conducted, interim results, how the data is used and disseminated, and monitoring for the projects as well as human health and the environment. We

also suggest that the DEIS provide additional information about public coordination and monitoring for the prescribed burns. The DEIS should also clearly document why Alternative C is the preferred alternative.

The DEIS mentions climate change however details are lacking as to how this will be addressed in the studies. We believe the Council on Environmental Quality's December 2014 revised draft guidance for Federal agencies' consideration of Greenhouse Gas (GHG) emissions and climate change impacts in NEPA outlines a reasonable approach, and we recommend that the Forest Service use that draft guidance to help outline the framework for its analysis of these issues. Accordingly, we recommend the EIS include an estimate of the GHG emissions associated with the project, qualitatively describe relevant climate change impacts, and analyze reasonable alternatives and/or practicable mitigation measures to reduce project-related GHG emissions. In addition, we recommend that the NEPA analysis address the appropriateness of considering changes to the design of the proposal to incorporate GHG reduction measures and resilience to foreseeable climate change. The Final EIS should make clear whether commitments have been made to ensure implementation of design or other measures to reduce GHG emissions or to adapt to climate change impacts.

EPA has rated each of the 2016-2020 Fernow Experimental Forest Project action alternatives an EC-2 (Environmental Concerns/Insufficient Information), according to the EPA rating system described on the website www.epa.gov/compliance/nepa/comments/ratings.html. Thank you for providing EPA the opportunity to review this project. We would appreciate discussion of responses to our comments, at your convenience. If you have questions regarding these comments, the staff contact for this project is Barbara Okorn; she can be reached at 215-814-3330.

Sincerely,



Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

Enclosure

Enclosure

Detailed Technical Comments 2016-2020 Fernow Experimental Forest DEIS

- If culverts are being repaired and replaced efforts should be made to accommodate passage for fish and wildlife.
- Methods other than herbicides should be considered for controlling invasive
- Coordinate with the U.S. Fish and Wildlife Service and other appropriate state and federal agencies about listed species, migratory birds and other species of concern. This would also include time of year restrictions for clearing and burning activities.
- Additional information should be provided about who the responsible official is (who will be making decisions on the project alternative). Is this a Forest Service employee?
- Native non-invasive species should be used for revegetation efforts.
- Page 1-4- it is unclear if the Watershed acidification study is new or ongoing. Additional information should be provided about this study as well as the others describing the length of the study, purpose, monitoring, and adaptive management.
- Page 2-2 rationale should be provided for the buffers and crown closure values around streams. How were these values determined?
- Page 2-2 the discussion for “patch cutting harvest areas” is confusing. Additional information should be provided describing this process.
- Page 2-2 states that logging equipment could be restricted within the stream channel or off the stream banks except in designated areas. How were these areas determined? Impacts to aquatic habitats should be avoided.
- Page 2-8 it is unclear if these Mitigation Measures identified will be implemented or are only suggested. We suggest these actions are implemented. Is there mitigation proposed for aquatic impacts if any occur? All impacts should be mitigated. Commitments to mitigation and description of mitigation activities should be included in the Final EIS and Record of Decision.
- Monitoring activities for species of concern should be coordinated with the appropriate agencies.
- EPA is concerned about anticipated air emissions for the proposed project. As stated in the cover letter, we recommend consideration of CEQ draft guidance to direct discussion of potential issues associated with GHG emissions and climate change. Page 2-11: how will monitoring of fine particulate matter be determined? How will coordination with the public take place regarding burning at the Forest? Estimation of emissions should be included in the NEPA analysis. Offset mitigation should be considered. Implications of removal of forest cover should be included in overall impact assessment.
- It is unclear what will be done to monitor species succession and determine changes in species that may be associated with climate change. It would be of interest to monitor and assess this information as part of the studies done.
- Is there an adaptive management plan in place for the activities evaluated in the DEIS? We suggest that one be developed.
- Page 3-3 sediment contributions to Ellick Run are believed to be due to the presence of Forest Service Road 701. Are there any plans to fix the issues with this road? We suggest that this be done.

- Page 3-10 describes a non-perennial stream channel in watershed 2. What type of channel is this?
- Page 3-11 states that “the percentage of disturbed soils and harvested basal area in Camp Hollow sub drainage would be less than levels that would be needed to change the hydrology, channel morphology, or sediment budgets on a sub drainage scale.” What are these levels? Additional information and threshold rationale should be provided in the FEIS.
- Page 3-12 discusses sediment from haul roads reaching streams. Efforts should be made to correct problems in this area and other watersheds where needed.
- Page 3-23 it’s unclear what is meant by “compaction could result in short-term (until litter layer is restored) increases in soil erosion and sediment delivery.” Additional clarification should be provided. It seems that the litter layer would be on top of the compacted soil.
- Page 3-26 additional information should be provided about weir ponds and sediment. Who is responsible for cleaning these ponds? What is the purpose for returning the sediment to the streams?
- Page 3-46 states that carbon cycling on the ecosystem scale will not be included in this analysis. Why?
- Page 3-52 “repeated burning resulting in the removal of a significant portion of the forest floor could result in changes in soil temperature.... Unless the canopy is significantly altered, however...” it is unclear how the canopy will not be significantly altered from burning. Additional information should be provided.
- Page 3-53 “Although we may predict small changes in soil temperature as a result of the prescribed fires, the extent of those effects are not known, nor are we confident of our ability to monitor very small changes in soil temperature. Thus, direct and indirect effects on soil are likely to be unmeasurable and negligible.” Additional information should be provided to support this conclusion.
- Impacts and avoidance of impacts to migratory birds should be addressed in the FEIS.
- Children’s Environmental Health does not appear to have been included in the DEIS. The Forest Service should address Executive Order 13045 for the Protection of Children from Environmental Health Risks and Safety Risks. Without analysis or documentation on this topic, it cannot be assumed that there is no potential risk associated with the proposed project that may adversely affect children’s health. EPA recommends that the EIS include an evaluation of potential direct, indirect and cumulative health impacts of the project on children’s health.