West Virginia Highlands Conservancy
P.O. Box 306
Charleston, WV 25321

September 6, 2021

Ms. Cynthia Sandeno, District Ranger
Monongahela National Forest, Marlinton-White Sulphur Ranger District
1627 Cemetery Road
Marlinton, WV 24954

Re: Comments of the West Virginia Highlands Conservancy on the proposed Upper Elk Ecological Restoration Project Preliminary Environmental Assessment

Dear Ms. Sandeno:

The West Virginia Highlands Conservancy (WVHC) has reviewed the Preliminary Environmental Assessment (EA) for the proposed Upper Elk Ecological Restoration Project. We participated in both rounds of scoping on this project, and we appreciate the opportunity to provide continued input as this project moves through the planning and environmental analysis process.

WVHC promotes, encourages and works for the conservation – including both preservation and wise management – and appreciation of the natural resources of West Virginia and the Nation. We focus primarily on the Highlands Region of West Virginia, but our work is for the cultural, social, educational, physical health, spiritual and economic benefit of present and future generations of residents and visitors alike.

Proposed Action

We noticed that the Forest Service has made several changes to the proposed action based on comments received during scoping. We would like to thank you for taking our concerns to heart and making modifications to address them. We are especially appreciative that the proposed Forest Plan amendment for the West Virginia northern flying squirrel has been dropped, regeneration harvesting has been reduced in Management Prescription (MP) 4.1, and commercial spruce restoration has been added in the MP 3.0 area near Red Spruce Knob.

We are confused by two components of the proposed action. First, based on the maps released with the EA, the status of cutback borders in MPs 4.1 and 6.2 is unclear. One map shows that, relative to the proposed action that was scoped, cutback borders have been eliminated in MP 6.2 and greatly reduced in MP 4.1. Another map shows that they still exist in MP 6.2. The text of the proposed action does not offer much clarification; it says that cutback borders are proposed for MP 6.2, but it does not say how much. On this point, we would like to reiterate our comments from scoping. Although we are not categorically opposed to cutback borders in MPs 4.1 and 6.2, we think that Forest Plan direction requires

cutback borders in MP 4.1 to be focused on restoring red spruce rather than removing overstory, and cutback borders in MP 6.2 to be consistent with a natural-appearing environment (i.e., avoid extensive canopy removal).

The other point of confusion relates to road decommissioning terminology. The proposed action uses the terms road decommissioning, soil and water road obliteration, and soil and water restoration treatment. What Appendix C describes as "road decommissioning" is really just road storage, as it is clear that the agency expects to use these roads again, and the proposed treatments are minimal and are not likely to eliminate hydrology disruptions. What Appendix C describes as "road obliteration" is actual road decommissioning because it involves treatments that are likely to lead to permanent elimination of hydrologic disruption (decompacting, outsloping/recontouring). "Soil and water restoration treatment" appears to be the decommissioning of old routes that have not been used in decades, with appropriate treatments to ensure hydrologic restoration. We think it would be more accurate to change the name of the current "road decommissioning" category to "road storage," and use either the term "road decommissioning" or "road obliteration" to describe what is currently referred to as "road obliteration" and "soil and water restoration treatment."

Soils

The EA creates confusion about how skid roads would be decommissioned. Language in the soils analysis differs from the language in Appendix C, where the detailed specifications are presented. Appendix C says (paraphrased for brevity):

- On Pottsville geology full decommissioning would be done only on slopes greater than 30%. This would include deep ripping and pulling the fill slope back against the cut slope to achieve at least a 20% out slope. Skid routes on slopes less than 30% on Pottsville geology would be deep ripped, but would not have the fill slope pulled back against the cut slope. The only mention of BMPs is in relation to the storage of skid trails that would be used again in 10-15 years.
- On Mauch Chunk geology, skid routes on 20-30% slopes would be fully decommissioned by decompaction and pulling the fill slope back against the cut bank to achieve at least a 20% outslope. Skid routes on slopes less than 20% would be deep ripped, but would not have the fill slope pulled back against the cut bank. Slopes over 30% would be yarded by helicopter. Again, the only mention of BMPs is in relation to storage of skid routes that would be used again in 10-15 years.

In contrast to the detailed specification in Appendix C, the text of the soils analysis says only that skid routes on slopes over 30% would have the fill slope pulled back against the cut slope to achieve a 20% outslope, and routes on slopes less than 30% would be treated by deep ripping without pulling the fill slope back. No mention is made of the more restrictive specifications for areas of Mauch Chunk geology.

We strongly urge the Forest Service to adopt the more detailed and restrictive skid road/road decommissioning specifications in Appendix C throughout all of the documents for this project. However, we think the Forest Service also needs to commit to reviewing all skid roads in the project, regardless of slope or geology, and applying the more intensive decompaction and recontouring techniques wherever field conditions indicate interception of groundwater is occurring. Without such case-by-case action, the agency cannot be certain that skid roads would be decommissioned to a watershed-neutral condition, as required by regulations and directives.

The soils analysis contains no literature citations, references to data, or other rationale to back up the conclusions that adverse effects would be minimized. The analysis frequently invokes adherence to BMPs as a sort of guarantee that adverse effects would not occur. But when the Forest Service

conducted nation-wide monitoring of BMP implementation and effectiveness, it found that, across all types of activities monitored, only 56% of sites achieved a composite rating of "good" or "excellent" (J. Carlson, P. Edwards, T. Ellsworth, and M. Eberle. 2015. National Best Management Practices Monitoring Summary Report, Program Phase-In Period, Fiscal Years 2013–2014. USDA Forest Service 1070. https://www.fs.usda.gov/treesearch/pubs/50841). Timber activities had a better than average track record, with over 85% of sites rated at least good. Road, recreation, and range activities rated poorly, with fewer than half of road and recreation sites and about 20% of range sites rated good or better. The poor showing of road activities is especially disconcerting given that this project is proposing 5 miles of new road construction on Mauch Chunk geology that has a high risk of landslides. The analysis needs to present information that supports its conclusions that adverse effects would be minimized.

The soils section focuses only on the amount of detrimental disturbance (i.e., the area of soils that would be physically disturbed). It makes no mention of the potential for activities to exacerbate the impacts of acid deposition and nutrient depletion, despite the fact that a substantial amount of activity would occur on the Pottsville geologic substrate, which is highly susceptible to nutrient depletion. This issue must be analyzed to demonstrate lack of significant effects.

Regarding activity on steep slopes, the soils analysis says "short, discontinuous segments of mechanical disturbance that intersect slopes 40-50% and >50%, but this is based on a desktop analysis, and these areas would be avoided during project implementation." This commitment to avoidance of mechanical disturbance on slopes over 40% needs to be included in the design criteria section so that it becomes clear that skid routes are required to avoid slopes over 40%.

Aquatics

Indicators for the aquatics analysis include sedimentation, water chemistry, habitat features, and effects on sensitive species, but do not include disruption to hydrology. Hydrology disruption is one of the main long-term adverse impacts of skid roads and roads. The analysis only talks about interception of ground water in the context of it potentially increasing erosion and sedimentation. An equally important impact of groundwater interception is the fact that it causes the soil profile to drain out more quickly in wet weather, which reduces the amount of stored water available to maintain stream base flows during dry weather. The section on road construction contains a brief mention of alteration of hillslope hydrology, but again the discussion is limited to how such alteration affects sedimentation, with no mention of impacts on stream flow. The aquatics analysis needs to address the impacts of hillslope hydrology alteration on stream flow.

Like the soils section, the aquatics analysis also says that only those skid roads on slopes greater than 30% would be recontoured to a 20% outslope, with no mention of the more stringent requirements on Mauch Chunk geology. As noted above, the more stringent requirements outlined in Appendix C need to be used throughout all project documentation, along with decompaction and outsloping anywhere groundwater is intercepted.

The aquatics section states that "[p]recipitation events during road construction can cause sediment movement that would be expected to mostly be mitigated with BMPs." But, as noted above, nation-wide BMP monitoring showed that road activities have a poor track record of BMP implementation and effectiveness. The EA needs to include information that supports the conclusion that sedimentation would be mostly mitigated.

In reference to a segment of new road construction, the aquatics section states that "[t]he beginning 1800' of new construction would be a grade of 9-12% in close proximity to a perennial stream. Steep grades can accelerate erosion and runoff from forest roads (Akay et al. 2008). The greatest potential for impacts could come from periods of heavy traffic use (Luce and Black 2001)." The text makes no mention of any measures to avoid, minimize, or mitigate the impacts. Such measures need to be included.

The aquatics section includes a discussion of the potential for management related soil disturbance to exacerbate the impacts of acid deposition and nutrient depletion. But the discussion is very general in nature and does not outline any specific expected effects (location, extent and degree of effect). It says that impacts are likely to be of short duration, basically lasting until skid road decommissioning is completed. The analysis also says that the impacts may cause "slightly less desirable conditions" for brook trout in "most cases," but acknowledges the possibility of suitable habitat being reduced in "extreme instances." The analysis later acknowledges that impacts may "remain as a lesser state until the organic soil horizon returns to pre-treatment conditions." It goes on to state that mitigations (skid road decommissioning) are designed to return vegetation and organic matter more quickly, and that BMPs and mitigations should reduce the potential for effects and speed the overall recovery time. The analysis does not tell us (1) current physical and chemical conditions, which are important for determining effects and prioritizing restoration work, (2) where the impacts are likely to occur and how much habitat would be affected, (3) the intensity of the impacts, (4) whether brook trout or other species are likely to be extirpated anywhere, (5) the extent to which habitats are likely to recover and the timing of such recovery, and (6) the effectiveness of BMPs and mitigations in lessening impacts and facilitating recovery. No data, literature citations, or other rationale are presented to back up the conclusions that impacts would be slight, temporary, and would be reduced or eliminated by BMPs and mitigation measures, except for one literature citation that is used to support the statement that increased soil organic matter in acid-sensitive soil has shown better nutrient cycling and recovery of acidified systems. The same criticisms could be made regarding the analysis of sediment, which is also very general and does not really tell the reader anything about the amount and intensity of expected impacts, nor does it provide any supporting rationale for the conclusions. Without better evidentiary support for its arguments, the aquatics analysis cannot be relied upon to support a conclusion that no significant effects would occur.

The aquatics analysis dismisses the potential for any impact on public water supplies by saying that riparian buffers and BMPs will prevent adverse effects. The analysis presents no rationale or documentation to support the conclusion, and therefore fails to establish the absence of significant adverse effects.

The aquatics analysis makes no mention of the karst geology that is prevalent throughout the lower elevation parts of the watershed, and contains no discussion of whether the project could affect any of the sinks that transmit water into the karst system and ultimately into the Elk River. It is possible that all of the proposed activity is at a higher elevation and thus the karst areas would be well-buffered from runoff and other impacts, but if that is the case, the analysis should say so.

The section on aquatic sensitive species consists of a table with unsupported impact determinations, coupled with a reference to the Biological Evaluation (BE), which is contained in the project record and has not been made public. If the BE is to be used to support conclusions in the EA, it should have been made public at the time of publication of the EA. As it currently stands, the effect determinations for aquatic sensitive species are unsupported and cannot be relied upon for decision-making.

The brook trout analysis is a series of conclusory statements. Data, citations, or other rationales are needed to support the conclusions.

Wildlife

In defining the time period for the analysis, the wildlife section says, "[t]he temporal boundary for effects on terrestrial wildlife species is 25 years from the beginning of project implementation, because in this timespan the canopy would begin to close again and no continuing effects are likely after canopy closure." This statement is obviously incorrect. Forest stands continue to grow and change for more than a century following catastrophic disturbance such as timber harvest. Habitat for animals changes along with the vegetation. The analysis needs to reflect the true time scale of the impacts.

The wildlife section cites analysis in the OAR table and BE in the project file cited as justification for dismissing some RFSS animals from analysis, without further elaboration on that analysis in the EA. The OAR and BE should have been made available to the public at the time the Preliminary EA was published; otherwise, the dismissal of species from the analysis cannot be justified to the public.

The text of the effects analysis for RFSS animals is mostly unsupported assertions. Table 19 contains a much better analysis in the "effects" column, with most effect determinations supported by what appears to be a well-reasoned rationale. However, no supporting literature or data are cited. Such citations are needed. Perhaps they are in the BE, but the BE has not been provided to the public.

Part of the rationale given for minimal effects on many species is the fact that the species are not known to occur in the project area and/or are known from few occurrences across the Forest. This argument does not support the no effect/minimal effect conclusion unless comprehensive surveys have been conducted. The EA needs to provide documentation of such surveys; otherwise, it cannot rely on absence or extreme rarity for its conclusions.

The analysis for West Virginia northern flying squirrel (WVNFS) is mostly well-reasoned, although parts of it are speculative (particularly the effects on habitat). The analysis of direct impacts to individuals appears solid, although it is mostly based on anecdotal information. Because the project has the potential for long-term improvement of habitat, and not much hard evidence exists to support the effects analysis, the project should include a research and/or monitoring component to better document the effects of management on WVNFS and its habitat.

Table 20 lists activities that would occur within suitable habitat for WVNFS. For most of these activities, it uses lack of known WVNFS captures in the activity areas as a rationale for stating that impacts would be negligible. However, nowhere in the EA does it state that effective surveys for WVNFS were conducted in the activity areas. Therefore, lack of presence cannot be used to support conclusions of no/minimal effect.

The proposed cutback borders would impact 23 acres of suitable habitat for WVNFS. Cutback borders might be compatible with WVNFS habitat if they retain most of the tree canopy and focus on releasing spruce. But the EA does not say that the cutback borders in WVNFS habitat would be any different from those elsewhere in the project area. Appendix A says that more than 50 percent of the canopy would be removed in most of the width of the cutback borders. Such removal of the canopy likely would render the habitat unsuitable for WVNFS, thereby constituting an adverse impact, which is prohibited by Forest Plan Standard TE64. The cutback borders within suitable habitat must be redesigned to retain most of the existing forest canopy.

The proposed creation of wildlife openings would remove 7 acres of suitable habitat for WVNFS. This removal of habitat would have an adverse effect, which is prohibited by Forest Plan Standard TE64. The proposed openings in suitable habitat must be dropped from the proposed action or relocated outside of suitable habitat.

Proposed new roads would impact 6 acres of suitable habitat for WVNFS. The EA cites design features that would limit removal of potential nest trees, but it ignores the fact that the loss of habitat would constitute an adverse effect, and would not be consistent with Forest Plan Standard TE64. The proposed roads need to be removed from suitable habitat.

Cerulean warbler is dismissed from analysis due to lack of habitat, with no rationale or explanation as to how this was determined. Such a rationale needs to be presented if the species is to be dismissed from analysis.

Botany

The EA does not contain a strategy for containing the spread of non-native invasive species (NNIS) due to project activities. The EA makes a general statement that NNIS would be treated in accordance with the Forest-wide NNIS EA. Although the Forest-wide NNIS EA includes helpful general strategies for managing NNIS infestations, it does not include a specific strategy for the project area and the proposed project activities. To demonstrate an effective control strategy, as well as to allow a thorough assessment of the impacts of NNIS control on other resources, the Upper Elk EA needs to identify the infestations to be controlled, show their locations relative to proposed activity units and environmental features, quantify the expected areal extent of the treatments, and fully describe the techniques to be used. This approach will help ensure compliance with Forest Plan guideline VE24, which states:
"NNIS management should determine the presence, location, and amount of infestations. Management strategies should also identify:
a) Methods and frequency for treating infestations,
b) Treatment procedures and restrictions,
c) Reporting requirements, and
d) Follow-up or monitoring requirements."

Analysis in the OAR table in the project file is cited as justification for dismissing some TES plants from analysis, without further elaboration on that analysis in the EA. The OAR table should have been made available to the public at the time the Preliminary EA was published so that the public could evaluate the decision to dismiss certain species from the analysis.

The discussion of Roan Mountain sedge acknowledges that some impacts could occur, then asserts that impacts would not adversely affect Forest-wide population viability. This conclusory statement needs to be supported by evidence and a logical rationale.

The cumulative impacts section states, "[n]o reasonably foreseeable actions that overlap in time and space with the Upper Elk project would affect known occurrences of TES plants. Therefore, the direct and indirect effects of the Upper Elk project would constitute the entirety of all known cumulative effects." This cumulative impacts analysis is inadequate. Recent past and ongoing projects on the Monongahela National Forest are affecting several TES plant species, including Roan Mountain sedge, smooth rock skullcap, white alumroot, small whorled pogonia, running buffalo clover, and Shriver's fringed orchid. The cumulative impacts section needs to analyze the past, ongoing, and reasonably foreseeable future impacts of all of these projects on these species, and then make viability determinations in the context of these cumulative impacts to the Forest-wide populations.

The botany section says, "[a] Biological Evaluation (BE) for TES plants was completed for the Upper Elk project and is located in the project record." Given the EA's reliance on the BE, the BE should have been provided to the public at the time the EA was published. Otherwise, the conclusions in the EA cannot be supported.

Gauley Mountain Inventoried Roadless Area

WVHC favors most of the proposed activities in the IRA, as they will restore ecosystems, repair past watershed damage, and enhance habitat for threatened, endangered, and sensitive species. Although the wildlife openings and cutback borders do not necessarily align with our priorities, as long as they constitute a minor component of the landscape and are implemented in a manner that maintains the natural appearance of the environment, they would appear to be consistent with Forest Plan direction and the Roadless Rule. Therefore, WVHC concurs with the Forest Service's determination that the proposed activities are consistent with the 2001 Roadless Rule.

Climate Change and Carbon Storage

We recognize that the forestry sector constitutes a minority of the global carbon budget, and that within that sector, timber management that does not cause land conversion represents a minority of the emissions. But one could argue that individual activities within other sectors of the global economy also are minor players in the global carbon budget. It is the cumulative impact of all of these activities taken together that is important. The climate crisis has reached the point where it is now a dire emergency, and it is imperative that humanity reduce greenhouse gas emissions to net zero over the course of the next few decades. The Executive Order on Tackling the Climate Crisis at Home and Abroad sets the net-zero deadline at no later than 2050, and it calls for "a Government-wide approach that reduces climate pollution in every sector of the economy" (https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/). Reaching net zero emissions entails examining every contribution to greenhouse gas emissions and finding a way to eliminate, minimize, or offset it. This means that the Forest Service should estimate carbon emissions and sequestration due to its management activities, and design activities such that they minimize net emissions.

The EA argues that the project will increase resiliency to insect, disease, and fire impacts, and therefore will actually result in an increase in carbon sequestration. However, the research cited does not support this argument. The cited literature relates to the wildfire-prone coniferous forests of the western US, which arguably can be made more resilient to carbon-releasing catastrophic disturbance by reducing stand densities and thinning out smaller diameter trees. These citations do not support the notion that even-aged hardwood management in moist, cool, high-elevation forests of the central Appalachians would increase resilience to catastrophic disturbance and decrease future carbon loss. Support for this argument would require pertinent research from even-aged hardwood management in cool, mesic ecosystems of the eastern US.

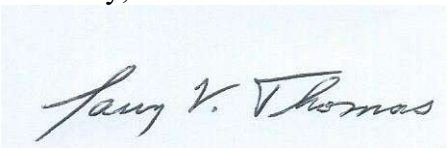
We do think that the proposed spruce restoration has the potential for a long-term increase in carbon sequestration in the soil. Research conducted collaboratively by West Virginia University and USDA has suggested this potential (2014 briefing paper, Red spruce (Picea rubens) influence on soil organic carbon (SOC) stocks, S. Connolly and T. Naumann, http://restoreredspruce.org/wp/wp-content/uploads/2009/04/white_paper_spruce_soil_carbon_fs_wvu_technical_2014.pdf). We encourage the Forest Service to investigate this potential positive benefit of the project.

To evaluate the project's overall carbon flux, sequestration due to activities like spruce restoration would need to be estimated, along with all the other forms of carbon sequestration and carbon loss due to the project. This accounting should include direct emissions from equipment, loss of carbon in waste material (tops, stumps, roots, non-merchantable stems, etc.), loss of carbon due to soil disturbance and vegetation changes, the status of stored carbon throughout the lifecycle of wood products, the ability of mature forests to store and continue sequestering carbon, sequestration of carbon in new growth, and long-term changes in carbon sequestration due to management-induced changes in the state of the ecosystem, including the soil.

Conclusion

Once again, we thank you for the opportunity to provide comments on the Preliminary EA, and we appreciate the previous opportunities for stakeholder engagement. We look forward to continuing to engage with you on the planning and development of the Upper Elk project such that project benefits are realized while sensitive environmental resources are conserved. Should you have questions regarding these comments, please feel free to contact me. You may also contact the Chairperson of our Public Lands Committee, Kent Karriker, at 304-636-8651 (bykarriker@suddenlink.net).

Sincerely,



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