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Organization: Southern Environmental Law Center

Title: Senior Attorney

Comments: Dear District Ranger Yonce,

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the North Shenandoah Mountain Restoration and Management Project, which was noticed on August 15, 2019. I submit these comments on behalf of the Southern Environmental Law Center (SELC).

First, we want to acknowledge and thank Forest and District staff for the hard work it has taken to get to this point. Having submitted fairly robust comments in September 2016, February 2017, and November 2018 (on behalf of SELC and the Virginia chapter of the Sierra Club), as well as participating in public meetings and working groups, we are glad to see that the Draft EA addresses many of the issues discussed in those comments. Among other positive aspects of this proposal:

- * We appreciate the District issuing a Draft EA for public comment, which is consistent with the project's collaborative approach and affords the agency an opportunity to make final adjustments in the Final EA.
- * We appreciate the District's recognition of the Beech Lick Knob Potential Wilderness Area (PWA) within the project area and analysis of the project's effects on its wilderness characteristics. We further appreciate the District's commitment that the proposed actions will not impact the PWA's eligibility to be considered in future wilderness inventory and evaluation.
- * We appreciate the District's commitment that no old growth will be harvested.
- * We appreciate the District's consideration of recommendations in the GWNF's Travel Analysis Process and efforts to improve road conditions that are causing water quality issues in the project area.
- * We appreciate the efforts to improve aquatic passage by replacing culverts in the project area.
- * We appreciate the District's attention to addressing existing infestations of non- native invasive plants (NNIP) in the project area and controlling the spread of NNIP following project implementation.
- * We appreciate the District's efforts to reduce negative impacts to and improve conditions for wood turtles in the Slate Lick area.
- * We appreciate the District's acknowledgement and discussion of the priority watersheds in the project area.
- * We appreciate the removal of management in northern hardwood forests from the proposal.
- * We appreciate the District's intention to share specialist reports for the project (e.g., the soils report reference in the Draft EA) with the public by posting it to the project website.

All of our comments on this project have been developed in light of the collaborative approach to planning this project, with public involvement through website information, public meetings and workshops, and field trips. While this project has at times moved in fits and starts, there has been meaningful dialogue with project participants, information sharing, and efforts to constructively address issues or concerns that arise.

More broadly, this project has provided another opportunity for implementing many of the George Washington National Forest (GWNF) Stakeholder Collaborative group's recommendations for the revised GWNF Forest Plan. Collaborative members have participated extensively in this project, which has allowed us to continue building upon the successes of the similarly collaborative Lower Cowpasture project. The Group's collaborative approach and balanced vision continues to work, allowing historically opposed stakeholders to accept and support both additional protection and increased management. For example, this approach enables stakeholders to support both the proposed Beech Lick Knob Wilderness located within this project area and the unusually large scale of management proposed for timber and certain wildlife in this project. Of course, we look forward to future projects that will involve recreation within this area and throughout the District.

While many of our previous concerns have been addressed, we would also like to offer constructive comments on remaining issues. One of our largest concerns relates to new information in the Draft EA regarding the presence of several endangered, sensitive, and rare species that could be negatively impacted by the proposal. These species were not considered and provided for in the revised Forest Plan.

1. Analysis of Endangered, Region 8 Sensitive, and Locally Rare Species

We are very eager to learn more about and discuss the District's analysis of several endangered and Region 8 sensitive species, as well as recently discovered locally rare species, that are within or close to the project area (We also want to make sure that the District is coordinating with the Virginia Department of Natural Heritage (VDNH) about inventorying, protecting, managing, and planning for conservation of these endangered, sensitive, and rare species. Forest Service Manual (FSM) 2670.46(3), 2671.1. As of a few days before the comment deadline, it was not clear that VDNH had received public notice of the Draft EA being out for comment. If that is the case, the District should extend the deadline to provide time for VDNH to review and comment on the proposal. We may submit additional comments after learning more information about these species from VDNH.). Based on the limited information in the Draft EA, it is not clear whether the District has conducted adequate surveys for these species or adequately provided for their protection from negative impacts of the proposed management.

The Draft EA contains very little information about these species and possible impacts of the proposed actions on them. Has a Biological Evaluation (BE) been prepared? The BE, which is the primary process by which effects on these species are analyzed, considered, and documented, generally contains a more detailed analysis of effects than is found in an EA. If the District has not yet completed a BE with adequate analysis, the conclusions in the Draft EA regarding effects on these species are unsupported and inadequate.

And if the District has completed the BE (even in Draft form), it would have been useful to make it publicly available on the project website during the comment period. I understand from Forest staff that the District intends to post project specialist reports to the project website when they are available. I strongly urge the District to do the same with the BE and other major project documents going forward.

The ability to review and comment on the BE, as well as more detailed EA analysis that includes the additional analysis recommended below, is necessary to provide an opportunity for well-informed, meaningful public comment on this project, as required by NEPA. Additionally, posting the BE to the project website could save the agency any time and resources spent responding to individual requests for these documents.

We also wish to note that conducting the BE after releasing a Draft EA is not the usual practice among national forests in the Southern Appalachians. Elsewhere in the region, forests routinely post the Draft EA, with BE, to the website during the public comment period (e.g., Cherokee National Forest in Tennessee, Nantahala-Pisgah National Forest in North Carolina). The BE is then included as an appendix to the final EA.

When I requested the BE in August (and other project documents), I was instructed to file a Freedom of Information Act (FOIA) request, which is being handled by the Region. I have not yet received a response. So without knowing the status or content of species analysis in the BE, it is not yet clear whether the District has satisfied its obligations under the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), or the Endangered Species Act (ESA).

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1. Region 8 Sensitive Species

NFMA requires the Forest Service to "provide for diversity of plant and animal communities." To this end, agency

regulations require that forest plans "include plan components to maintain or restore the diversity of ecosystem and habitat types" in the plan area.⁴ Further, to implement this direction, the Forest Service Manual requires the agency to maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on national forests. The Manual describes a viable population as one "that has the estimated numbers and distribution of reproductive individuals to ensure the continued existence of the species throughout its existing range (or range required to meet recovery for listed species) within the planning area."

Several Region 8 Sensitive species were found within the project area. Some of these species have species-specific protection in the Forest Plan and/or project design criteria, such as the cowknob salamander, wood turtle, and butternut. Other species found in project activity areas do not have such provisions, such as the Shenandoah Mountain salamander and Monarch butterfly. Similarly, there are no provisions made for the Cupped Vertigo snail and Sweet pinesap, which are assumed present in proposed activity areas.

i. Monarch butterfly and Cupped Vertigo snail

The District asserts in the Draft EA that while project activities may impact individuals of these species, they "are not anticipated to cause loss of species viability on the Forest or cause a trend towards federal listing under the Endangered Species Act." There is no rationale provided for this conclusion about the monarch butterfly or the cupped vertigo. Moreover, the 2014 Forest Plan did not analyze the needs and threats to the Monarch butterfly or Cupped vertigo snail. The District needs to do so now. Again, without analysis in a BE to support these conclusions, the District has not fulfilled its obligations under NEPA or the NFMA.

ii. Shenandoah Mountain salamander

NatureServe ranks the Shenandoah Mountain salamander as G2G3 globally, and Virginia ranks the species as S2. Generally, the salamander does not tolerate habitat disturbances and occupies a small habitat range. The Forest Service has identified timber harvest as a threat to the salamander.

In the Draft EA, the District asserts that complying with management standards for the cowknob salamander in the Shenandoah Mountain Crest management area (MA 8E7), as well as Forest Plan standards for sensitive species and project-specific design elements, will limit negative impacts. This does not seem correct.

First, none of the activities that threaten the salamander - including proposed timber harvest, prescribed burning, and road construction - will occur in MA 8E7 areas. So those standards will not protect Shenandoah Mountain salamanders outside of that area. And the Draft EA discloses that Shenandoah Mountain salamanders were found in management areas other than MA 8E7.

Second, it is not clear in the Draft EA whether the District has complied with Plan provisions related to the Shenandoah Mountain salamander. During forest plan revision, the agency considered whether the ecosystem diversity plan components fully covered the salamander's sustainability needs. To do this, the salamander was grouped with other species according to their similar habitat needs, threats, and other characteristics. The Shenandoah Mountain salamander is associated with five species groups that have associated ecosystems. For two of these groups, the agency determined that because habitat needs would not be met in whole by plan components for ecological diversity, additional plan components and management strategies would be necessary:

* For High Elevation Coniferous, Deciduous, and/or Mixed Forest associates, the District should maintain the forested environment at elevations over 3,000 feet.

* For Cliff, talus, and rock outcrop associates, the District should manage these areas to enhance habitat for the salamander. In addition, if the District is proposing ground disturbance in Cliff, talus, and shale barren ecological systems, it must search for Shenandoah Mountain salamanders and analyze impacts on them. The District should comply with and document its compliance in the BE and EA.

Third, project design criteria in the Draft EA simply provides that a biologist will be consulted "if the salamander is

found during implementation." Who does the District expect to find these salamanders during implementation? Certainly commercial loggers do not have the expertise or duty to look for specific species of salamanders before logging. Rather, it is the agency's job to identify and address these threats before logging begins. Doing this requires more detailed plans and a commitment that the right people will look for the Shenandoah Mountain salamander at the right time.

Other Districts on the GWJNF have developed such plans for other Region 8 sensitive salamanders. For example, the Clinch District is home to the green salamander. With the Nettle Patch project, the District committed to a protocol to identify and protect green salamanders within all proposed thinning and regeneration units. The protocol required the following:

- * Specialists defined guidelines to identify suitable habitat for green salamanders. This included rocks that are at least 3' x 3' x 5' with deep crevices that are damp, shaded or sheltered from direct sunlight.
- * During sale layout activities, any sites meeting these criteria are identified. GPS coordinates, aspect, percent canopy cover, and photographs of these sites are recorded.
- * Forest Service biologists examine this information to identify where field surveys are necessary. At those sites, surveys are conducted at a time of year when green salamander presence is detectable. If a green salamander is confirmed present, the Forest Service reports data to expert Walter Smith at the University of Virginia-Wise and other project participants.
- * Sites with green salamanders present will be buffered from timber harvest. Specifically, all trees within 300 feet of a rock feature supporting salamanders are retained. If another rock feature supporting green salamanders is located within 500 feet, a 300' wide corridor between the rock features will be retained.

The District should consider developing an analogous protocol that is appropriate for the Shenandoah Mountain salamander.

i. Sweet pinesap plant

During plan revision, the Forest Service recognized the Sweet Pinesap plant as a Species Needing Occurrence Protection. Because such species are rare in occurrence across the forest, known populations should be protected. To that end, the Forest Plan requires that when land disturbing projects are proposed where the Sweet Pinesap is likely to occur, the District must

1. search for the plant, and (2) analyze effects of the proposed actions on it.

The Draft EA indicates that the District conducted botanical surveys for this plant outside of the plant's blooming season when the plant is not recognizable. As a result, the District assumes the plant is present in the activity area. But in light of the special status of this plant - a species in need of occurrence protection - and the requirement that such species be searched for and protected, it is not adequate for the District to simply assume the species is there. What is the plan to protect any populations existing in proposed timber harvest units? How will the District determine if the plant is present in proposed harvest units? At what time of year will the District survey proposed harvest units to identify it? The District needs this information to adequately analyze impacts in the BE.

With regard to all of these sensitive species, it is not clear from the Draft EA whether the District has completed the necessary groundwork or analysis, or developed adequate mitigation measures, to ensure they are maintaining species viability and avoiding a trend towards federal listing under the ESA. NEPA and the NFMA require more than has been done. The BE and EA should disclose and analyze these issues, as well as identify additional alternatives and mitigation measures for consideration.

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1. Rare species

The Draft EA mentions that 3 species of rare bees were recently discovered within the project area. They were not discovered in surveys being completed for this project. Rather, Virginia Department of Conservation and Recreation (VDCR) staff discovered these bees while completing surveys for a Dominion powerline right of way project that intersects the project area. The rare bee species include:

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- * *Osmia illinoensis*, which NatureServe currently ranks globally as GH (possibly extinct with "still some hope of rediscovery") and is a probable Virginia rank of S1 Extremely rare and often especially vulnerable to extirpation);
- * *Osmia felti*, which NatureServe currently ranks globally as G2G4 (Imperiled, Vulnerable, or Apparently Secure) with a probable Virginia rank of S1-S2

(Extremely rare to Very rare); and

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- * *Mellita Eickworti*, which NatureServe has not yet ranked globally and is a probable Virginia rank of S1-S2 (Extremely rare to Very rare).

Before these discoveries, none of the three species were not known to occur in Virginia and one of the species was considered possibly extinct until recently. These bees are so rare that "experts need to be brought in to help identify species." Moreover, additional rare species may be identified once an expert is able to identify the bees. According to the Draft EA, VDNH will likely add these bee species to Virginia's Natural Heritage's Rare Animal List.

The bees were discovered along the Dominion powerline right of way in close proximity to several proposed regeneration harvest units in the Feltz Ridge working area. In addition to regeneration harvest, the District is proposing thinning, forest stand improvement, grassy area enhancement, pine restoration, and small prescribed burns in close proximity to the powerline in this area. In the Slate Lick/Cross Mountain area, the District is proposing forest stand improvement, prescribed fire, and proposed dozer line in close proximity to the powerline. In the German River area, the District is proposing regeneration, thinning, grassy area enhancement, pine restoration, and temporary road construction in close proximity the powerline.

The Draft EA does not contain any discussion of these bees, what is known of their nesting and foraging habits, or their habitat. Nor does it contain any analysis of potential impacts of the proposed actions - from timber harvest to prescribed fire - on them. Instead, there is only passing mention of their discovery, followed by the conclusion that "the 3 new rare species [hellip] should not impacted negatively from timber harvest activities adjacent to the powerline right of way where they were found [because t]he vegetation the bees are using within the powerline right of way will not be impacted by any proposed project activity." Without supporting information and analysis, these conclusions are inadequate under NEPA and the NFMA.

The Draft EA fails to include and analyze relevant information about the bees. For example, there is information indicating that *Mellita eickworti* does not appear to depend on vegetation restricted to openings like the right of way. Rather, the bee may be "restricted to shady forest understory with deerberry." According to the Draft EA, deerberry is common in the midstory and as groundcover in the project area. Moreover, while shade-tolerant deerberry is likely to exist in forested areas, it seems less likely to exist in the sunnier powerline right of way. So it is not clear why the Draft EA does not address threats to the bee from cutting vegetation in nearby forest and instead focuses on vegetation within the corridor.

In addition, the soil types present in forested areas near the powerline may also provide suitable habitat for *Melitta eickworti*, which nests in the ground. Many groups in the family Melittidae "seem to prefer sandy soils for nesting." And many soils in proposed units near the right of way have sand components.

The Draft EA does not address many questions related to the bees, its habitat, and potential impacts of the proposal. For example, why does the Draft EA assume that vegetation in the right of way will not be removed when several units appear to extend across the right of way? Why does the Draft EA focus on vegetation in the powerline right of way as serving the bee's needs as opposed to vegetation in adjacent forest as well? How will logging truck traffic, temporary road construction, the operation of heavy equipment like skidders, and ground disturbance from logging affect the habitat and food sources for the bee? How will prescribed fire affect the bee? These are simply examples, not an exhaustive list, of issues the BE and EA must address.

Similar questions exist for the other bees. For example, NatureServe indicates that prescribed burning may threaten *Osmia illinoensis* and *Osmia feldi*. Has the District analyzed the impacts of prescribed fire on them? Nature Serve indicates that "neither the nesting substrate or floral resources" relied on by *Osmia feldi* are known. So why has the District focused on vegetation in the right of way to the exclusion of vegetation in the surrounding forest areas?

Because the Forest Service did not consider these bees during plan revision, both the NFMA and NEPA require the Forest Service to do so now. The fact that VDNH is likely to add these bee species to Virginia's Natural Heritage's Rare Animal List will likely impact the status that the Forest Service assigns to these bees.

For example, the bees may be added to Region 8's Species of Conservation Concern ("SCC") list and/or Region 8's Sensitive Species list. This would require maintaining viable populations of these species.⁴⁸ While identifying SCC usually occurs during the planning phase, it may occur at any time. Indeed, if agency staff receives new information indicating that species should be added to the SCC list, he or she should send this information to the Forest Supervisor. The Forest Supervisor should then evaluate the new information, use the expertise of state agencies like VDNH, document the rationale, and send the documentation and rationale to the Regional Forester. The Regional Forester will then go through the same analysis. And given the rarity of these bees, the likelihood that VDNH will add these species to Virginia's list of rare species, the associated high priority for conservation, it is likely that substantial concern exists as to these species' ability to persist long term. As a result, they are likely to be deemed SCC for which standards must be developed to maintain viable populations.

Additionally, the Forest Service may need to consider whether the bee species are Species Needing Occurrence Protection. Because such species are rare in occurrence across the forest, the Forest Plan provides that known populations should be protected. To that end, the Plan would require that when land disturbing projects are proposed where the rare bee species are likely to occur - including for example, proposed units in close proximity to the powerline - the District would need to (1) search for the bees, and (2) analyze effects of the proposed actions on it.

Again, because the Forest Service did not analyze these species during Plan revision, it must do so now. The District cannot satisfy its obligations under NEPA or the NFMA without completing this analysis now. If the District wants to move forward with this project more expeditiously, it could consider dropping management units in close proximity to the right of way from. If considering this option, the District should consult with bee experts within VDNH and/or elsewhere to identify which management actions and units should be avoided. We would like to be kept informed of this issue and may provide additional comments as we learn more.

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1. Endangered species

As briefly mentioned in the Draft EA, the critically-endangered rusty-patch bumble bee (RPBB) was discovered in July 2019 at two locations near the project area. We look forward to learning more about where it was found and resulting changes to the USFWS' modeling, including the High Potential Zone and Primary Dispersal Area. Because this issue has arisen in the nearby Duncan Knob project, I attach scoping comments for that project, which are relevant to this project also. The District should consider these issues as it proceeds with consultation with the USFWS.

2. Other issues

In addition to the above species-related issues, we would like the District to consider several other issues.

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1. Old growth

We are very pleased that the District does not currently plan to log any old growth that has been identified on-the-ground. In our view though, it is critical that the District commit to avoiding timber harvest in all areas that meet the criteria for existing old growth, regardless of when it is identified. This would include any additional patches of old growth identified while units are being marked for implementation.

We will not repeat the entirety of previous comments on this issue. But given the rarity and importance of old growth forest in the Southern Appalachians, the little existing old that has been field-verified on the GWNF, and the notorious unreliability of both stand age and stand type within FSVeg data, we believe that logging existing old growth - based on unverified assumptions about its existence elsewhere - is contrary to the evidence before the agency regarding the significance and rarity of old growth conditions. This would be very difficult to justify, especially without an EIS.

We note also that we may have additional questions or comments once we receive the old growth tally sheets requested through FOIA.

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1. Ecological Restoration

As we have emphasized in prior comments, we support ecological restoration as a primary goal for the project. We are glad the project is "aimed at improving watershed conditions, restoring habitats for a diversity of terrestrial and aquatic species, [and] increasing resilience in ecological systems." We appreciate that the scoping notice references certain current conditions of the project area, desired conditions set forth in the Forest Plan, and the Ecological Departure Analysis (EDA) for this project area.

We continue to believe though that the EA should explicitly recognize and apply the Forest Service's definition of ecological restoration:

Restoration. The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystems sustainability, resilience, and health under

current and future conditions.

To constitute valid ecological restoration, the proposed restoration must be called for at the specific site. Indeed, Forest Service policy recognizes the need to consider the conditions of particular sites, explaining that when developing restoration goals, the agency should consider "ecological influences of restoration activities at multiple scales." Here, the District needs to consider not only whether the proposed management would aid the landscape in meeting an ecological restoration objective, but also whether the management would help the recovery of a specific site that has been degraded, damaged, or destroyed.

For example, using timber harvest to promote diversity in a pine plantation or other pine- dominant uncharacteristic forest could constitute ecological restoration, while creating early succession habitat through logging in an area with characteristic, native, relatively healthy and intact forest of high ecological integrity would not. The latter site is not damaged or degraded and thus does not need this work. As such, it would not constitute "ecological restoration."

To be clear, this issue is one of clarity in describing the purpose of proposed activities. As we have noted in previous comments, all proposed activities need not qualify as ecological restoration. Rather, some activities are proposed primarily to meet other goals, such as creation of early succession, wildlife openings, or waterholes to benefit game wildlife. Those are fine objectives. But the ESH creation activity, for example, does not automatically constitute "ecological restoration" simply because the Forest Plan or project ecological departure analysis identifies a need related to ESH at the forest- or landscape- scale. Rather, it constitutes ecological restoration only if it meets the Forest Service definition provided above. In the EA, we continue to urge the District to be very clear though about whether the primary purpose of a proposed activity is ecological restoration or to meet other goals.

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1. Non-native invasive plants (NNIP)

We are very glad to see that the NNIP section in the Draft EA includes discussion of project impacts on the spread of NNIP, current conditions within the project area, and design criteria to minimize or reduce these impacts. We also applaud ongoing efforts of District staff to combat NNIP in priority areas.

The Draft EA provides that monitoring for new NNIP infestations and of NNIP treatments will be conducted as described in the monitoring section of the EA, and that as a result, the spread of NNIP will be minimal. We agree that monitoring to assess the need for and effectiveness of NNIP treatment is critical to achieving this. Of course, treating NNIP is also necessary. Unfortunately, neither the Monitoring section nor the Design Criteria section appears to commit clearly to treating NNIP following assessment/monitoring.

It is very important to us that this be included in the final EA and Decision Notice.

Accordingly, we recommend adding language similar to that used in the Lower Cowpasture project:

The Forest Service will assess the need to treat non-native invasive plants (NNIP) within regeneration harvest units in conjunction with site preparation work which typically occurs in the first or second growing season after final harvest, and in conjunction with regeneration surveys that typically occur in the third growing season after final harvest. The Forest Service will assess the need to treat non-regeneration harvest units based on the degree of infestation occurring in the sale area. The Forest Service will then treat areas that are determined to need treatment on a case-by-case basis, depending on the severity of NNIP infestations.

Finally, we want to reiterate our view that because NNIP treatment is a mitigation measure that is essential to this project, it should be a top priority for KV and other funding. When prioritizing and allocating funds for project activities, we believe NNIP treatment should take precedence over activities that are less critical and/or could actually increase NNIP infestations, e.g., creation of new wildlife openings. This is particularly true where, as the Draft EA recognizes, many of the existing wildlife openings have been invaded by nondesirable or NNIP over time and need restoration to native grasses.

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1. Sedimentation

We have a few questions and requests related to potential sedimentation impacts of the proposed activities.

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1. Existing TMDLs

We are interested to learn more about the TMDL for the North Fork of the Shenandoah River, which addresses a benthic-macroinvertebrate impairment. These are often related to sediment. Has the District reviewed the TMDL? If it is a sediment impairment, will any of the proposed harvest units contribute to the impairment? If any of these issues are implicated, the Final EA should disclose and address them.

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1. Steep slopes and soils

We are disappointed the District did not use existing GIS tools to create maps that illustrate slope and the erosion hazards associated with soil types within proposed units. As we have discussed in earlier comments, this is a simple tool to identify and avoid riskier sites that necessitate mitigation or later have to be dropped. It is also a very useful tool to provide the public for review.

At a minimum, it is useful for the EA to discuss erosion risks. The Panther Mountain project EA recently included information about erosion hazards associated with specific soils in the proposed harvest units, and it was very helpful in understanding and analyzing potential impacts.⁶⁶ The Draft EA indicates the District may have done this for this project also. The soils report referenced in the Draft EA, however, was not released for review. We look forward to reviewing it when it is available and may have more comments then.

As you know, we produced such maps with our scoping comments to give an initial impression of what the District's soil and slopes analysis may reveal. The maps indicated that most of the proposed harvest units contain areas with both soils of moderate to severe erosion risk and steep areas with slopes over 35%. While many of

the more problematic units have been adjusted, there are still a number of units that are concerning, including but not limited to units 27, 37, 38, 39, 18, 23, 24, and 105.

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1. Sustained slopes

Related to the above issue, it is a recurrent issue in projects we review that "sustained slopes" is not defined. The Forest Plan requires the use of advanced harvesting methods such as cable on "sustained slopes" of 35% or greater. And the Draft EA acknowledges that many of the proposed units contain areas with slopes of 35% or greater. There can be a great difference in opinion though about how much steep land constitutes a "sustained slope" versus a "small inclusion" of a steep area. Our larger concern is that, without quantifying or otherwise defining what a "sustained slope" is, we have seen Districts stack multiple bladed skid trails/roads and temporary roads across large areas of steep forest rather than using advanced harvest methods or adjusting unit boundaries to exclude the steep area. This excessive construction of bladed skidded trails can have significant impacts, as well as exceed the impacts analyzed in the EA.

With the Lower Cowpasture and Nettle Patch projects, the Districts and we were able to resolve this issue by limiting the permissible length of bladed skid trails. We urge the District to consider adding similar design criteria to this project, which as discussed above, still contains steep swaths of land within units. We recommend language similar to that used in the Lower Cowpasture and Nettle Patch projects: "All bladed skid trails/roads and temporary roads required for ground based logging on slopes 35% or greater will be less than approximately 300 feet in length." We look forward to discussing this issue with you.

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1. Monitoring

We strongly urge the District to flesh out the monitoring plans beyond what is provided in the Draft EA, particularly given the large scale of this project and the long timeframe for implementing it. Robust monitoring plans, developed prior to project implementation, are critical. The EA should describe and commit to a fleshed out monitoring plan that describes quantifiable objectives for project activities, a clear plan for monitoring to determine whether and to what extent those objectives were met, and adjustments that may be made if results or effects are not as expected. We also recommend that the EA explicitly provide for an adaptive management approach to the project (again, due to the scale and timeframe for implementing this project).

A useful monitoring plan requires more detail than is provided in the Draft EA. For example, the EA should describe which conditions will be monitored in commercial and non-commercial units to assess whether specific objectives for forest structure and species composition are being met. While the Draft contains descriptions of the desired conditions, it should summarize those objectives and tie them to specific monitoring tasks in one place. The Monitoring Questions, Monitoring Elements, and Task Sheets provided in Appendix H of the Forest Plan provide a useful starting point for developing an effective monitoring and evaluation program.

The Lower Cowpasture project also provides an example. There, the District committed to the following:

As part of the monitoring plans for the Lower Cowpasture project, the Forest Service will monitor forest (vegetation) structure and composition in the overstory, midstory, and understory within three to five years after harvest. This monitoring will occur in a representative sample of stands that receive each of the following types of treatments: shelterwood with reserves, shelterwood, free thinning, thinning from below, and hardwood restoration. This monitoring will be accomplished in conjunction with regeneration surveys which typically occurs in the third growing season after final harvest.

We then worked with Warm Springs District staff and other stakeholders to develop a workable monitoring guide for the Lower Cowpasture project that would produce the needed information and was feasible for the District to complete. The guide included a description of the monitoring activity, as well as designation of the party responsible for implementation. The same should be done for this project, and we look forward to discussing monitoring with the District.

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1. Continued public participation throughout implementation

Given the collaborative nature of this project throughout development and analysis, we strongly urge the District to commit to continuing this collaboration throughout implementation. The Warm Springs District did so with the similarly collaborative Lower Cowpasture project and has done a great job of keeping project participants informed and engaged. It is worth considering that this level of continued public engagement and enthusiasm is often key to securing grants for implementation, such as the Joint Chiefs' funding awarded for the Lower Cowpasture project.

In the Lower Cowpasture Decision Memo, the Warm Springs District committed to the following:

In an effort to continue the collaborative process, the Forest Service will inform participants when any of the Lower Cowpasture projects are scheduled for implementation and will incite and host public field trips. For example, when commercial vegetative management is planned, the Forest Service will incite participants on field trips to discuss sale preparation activities such as unit layout, marking stream management zones, temporary roads, and skid trail locations with Forest Service staff before the sale is advertised for bids. Post sale field trips will also occur. The Forest Service will also notify project participants when cutting units are open for harvest, and when logging operations are planned. Field trips will be scheduled to avoid active sale preparation activities and active logging operations.

Accordingly, we recommend, at a minimum, an annual meeting to update the public on the work conducted in the prior year and plans for the upcoming year, as well as field trips pre- and post- implementation. Because it has been such a success, we encourage the District to consider sending bi-annual newsletters with updates to project participants as the Warm Springs District has done for the Lower Cowpasture project. Keeping project participants informed as timber sale units are laid out and marked, prior to sale advertisement, would also be greatly appreciated. We are happy to discuss ideas with you to identify workable solutions.

3. Conclusion

Thank you again for the opportunity to comment on the Draft EA. We look forward to this project moving forward and continued collaboration with the District and other stakeholders. We will be in touch with you to follow up on our comments and remaining questions about the project. We also look forward to continuing to offer input on the project as it enters its final stages of planning and to reviewing the proposed decision.

Sincerely,

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