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RE: Comments on the Grassy Ridge Project and Draft Environmental Assessment

Dear Mr. Morgan:

Friends of Blackwater Canyon and **Center for Biological Diversity** appreciate the opportunity to submit the following comments on the Grassy Ridge Project and Draft Environmental Assessment (EA).

Friends of Blackwater ("FOB") is a non-profit conservation organization working to protect biodiversity in the Mid-Atlantic Appalachian Highlands. FOB has 5,000 supporters across West Virginia and in the surrounding states and work to protect the public lands used by our members. During the past 20 years FOB has moved 4,650 acres of critical endangered species habitat into public ownership at Blackwater Falls State Park and in the Cheat Canyon. FOB has funded research and advocacy for the endangered Indiana bat, Virginia big-eared bat, Cheat Snail in the Cheat River Gorge, the Cheat Mountain salamander, and advocated for federal protections for the West Virginia northern flying squirrel, northern long-eared and little brown bats. Friends of Blackwater has a longstanding interest in the conservation of rare, threatened, and endangered species in the Monongahela National Forest, and has a track record of active engagement in Forest planning processes. FOB has a Memorandum of Understanding to work with the Monongahela National Forest on improving water quality, maintaining hiking and biking trails and interpreting historic sites in Tucker County. FOB has done similar trail work in Blackwater Falls State Park and collaborated with Tucker County and the Town of Hendricks to place roadside markers at historic sites.

Center for Biological Diversity ("Center") is a nonprofit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental and administrative law. The Center has over 1.6 million members and online activists dedicated to the protection and restoration of endangered species and wild places. The Center has worked for over twenty-five years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life.

I. SUMMARY

FOB and the Center are primarily concerned with the proposed project's impacts to West Virginia Northern Flying Squirrel (WVNFS) and their habitat. First, the project's proposal to clearcut hardwoods in multiple stands does nothing to advance the purpose of need of the project and will likely fragment important WVNFS habitat. Second, the proposed project needs to be modified to exclude clearcutting in WVNFS buffers. Third, the draft EA does not meaningfully evaluate impacts to WVNFS. FOB and the Center urge the Forest Service to revisit the proposed project with more protective measures for the WVNFS.

II. DISCUSSION

A. The Forest Service Must Avoid Clearcutting in Hardwood Stands.

The purpose and need statement in the Draft EA indicates that the Grassy Ridge project is primarily focused on restoring red spruce and improving habitat for the WVNFS. *See* Draft EA at 1-4. Yet, the project calls for hundreds of acres of regeneration harvests in numerous hardwood stands. The figures in the Draft EA are of such poor resolution that it is impossible for us to determine exactly which stands would be clearcut but based on Figure 2 it appears many of these clearcuts would occur within or adjacent to areas identified as WVNFS habitat. *See* Draft EA at 36. Moreover, it appears that many of these stands may be in areas containing mature/late-successional forests. There is no explanation as to how these clearcuts advance the project objectives of restoring spruce and improving WVNFS habitat. In fact, regeneration harvests will likely do the opposite by eliminating important uneven-aged structure and fragmenting WVNFS habitat. Some of these areas may be 120 years or older and any amount of clearcutting would foreclose any potential restoration of these stands for more than a century.

Clearcutting in these stands is also inconsistent with Management Prescription 4.1 of the Forest Plan. The proposed project is entirely within MP 4.1 Draft EA at 1. MP 4.1 "focuses on restoration and management of disjunct red spruce and spruce-hardwood communities of the central Appalachians." Forest Plan at III-9. The Draft EA fails to explain how clearcutting (as opposed to thinning for example) advances these objectives for spruce restoration as it would strip the area of the multi-age stand structure called for in MP 4.1. Forest Plan at III-13. Further, even if these stands had little or no potential for spruce restoration "they are to be managed to promote healthy hardwood communities with a mix of age classes." Forest Plan at III-13. Clearcutting in this instance undermines any goal of achieving a mix of age classes.

Accordingly, we urge the Forest Service to drop its plans to clearcut these stands. Regeneration harvests neither advance the purpose and need of the project nor the Management Prescription provided for in the Forest Plan.

B. The Forest Service Must Avoid Clearcutting Within WVNFS Buffers.

It appears that the proposed clearcuts would occur primarily within WVNFS buffer areas containing predominately hardwoods. Draft EA at 38. Clearcutting in these areas would likely have significant adverse impacts to the species including direct mortality and injury, the loss of nesting habitat, and the elimination of important foraging habitat due to desiccation as explained

in greater detail below. We urge the Forest Service to modify the project to prohibit clearcutting in these buffer areas. The Forest Service ultimately removed proposed clearcuts inside WVNFS habitat and buffers from the Spruce Mountain project[1] and we believe similar action is warranted here.

C. The Draft EA Does Not Meaningfully Evaluate Impacts to the WVNFS.

The Draft EA does not adequately evaluate WVNFS habitat in the project area and it fails to meaningfully evaluate the project's impacts to the species.

Unlike in other projects, the draft EA does not explain the process by which the WVNFS habitat was evaluated with full data and scientific standards.[2] This is a serious omission.

The whole project assumes that flying squirrels and red spruce are interchangeable which is incorrect. WVNFS are strongly associated with late successional forest characteristics, including snags, downed wood, large diameter trees, moist climate, and high canopies.[3] Decreasing mid to late successional habitat in favor of an increase in early successional habitat, as is proposed, would decrease the habitat suitability for WVNFS significantly. Major food sources for WVNFS, including fungi, lichen and mast, can be severely impacted by disturbance associated with forest management.[4] "Unlike northern flying squirrels in the Pacific Northwest which are primarily mycophagists (including lichens), the West Virginia northern flying squirrel has a more varied diet."[5] Fungi and lichen are more abundant and diverse in mature forests, which means that young forests would be less able to provide several major components of WVNFS' diet.[6]

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[1] USDA Forest Service, Decision Notice and Finding of No Significant Impact for the Spruce Mountain Grouse Management Area Project at 6-7.

[2] For example in the Forest Service's FONSI for the Spruce Mountain Grouse Management Area Project, the agency explained: "WVNFS habitat was determined using the Monongahela National Forest WVNFS suitable habitat layer, the DNR Red Spruce cover layer, the Menzel model, satellite aerial imagery, known capture locations, and on-the-ground habitat verification." USDA Forest Service, Decision Notice and Finding of No Significant Impact for the Spruce Mountain Grouse Management Area Project at 6.

[3] Carey AB, Kershner J, Biswell B[L], Dominguez de Toledo L. 1999. Ecological Scale and Forest Development: Squirrels, Dietary Fungi, and Vascular Plants in Managed and Unmanaged Forests. The Wildlife Society. Wildlife Monographs no. 142; Smith, W.P. 2012. Sentinels of Ecological Processes: The Case of the Northern Flying Squirrel. Bioscience, 62(11): 950-961.

[4] Flaherty, E. A., M. Ben-David, and W. P. Smith. 2010a. Diet and food availability of the endemic Prince of Wales flying squirrel (*Glaucomys sabrinus griseifrons*) in Southeast Alaska: implications for dispersal across managed landscapes. Journal of Mammalogy 91:79-91.

[5] Mitchell, D. 2001. Spring and Fall Diet of the Endangered West Virginia Northern Flying Squirrel (Glaucomys sabrinus fuscus) Am. Midl. Nat. 146:439-443.

[6] Smith, WP. 2007. Ecology of Glaucomys sabrinus: Habitat, demography, and community relations. Journal of Mammology 84: 1044-1058; Selva, S.B. 1994. Lichen diversity and stand continuity in the northern hardwoods and spruce-fir forests of northern New England and western New Brunswick. Bryologist 97: 424-429.

WVNFS are considered an indicator species for mature and uncut forest,[7] partly because of their acute sensitivity to habitat fragmentation and disturbance.[8]

The problem with the approach used on this project is that the squirrel uses a much broader habitat than just the portion of the forest with red spruce. They use northern hardwoods for travel corridor especially very large old trees. They use red maple, stripped maple, beech, birch, serviceberry, oak, hemlock and blueberry as well as large amounts of lichen found on older trees (Mitchell 2001Am. Midl. Nat.). Removing large older trees from the forest in WVNFS habitat will remove these food sources and corridors for travel.

The EA states that WVNFS habitat will be impacted as a result of commercial logging but fails to explain the extent of impact or where it will occur. Large older trees cannot simply be plucked out of the forest during commercial logging. The forest floor will be impacted by machinery. The EA doesn't explain the impacts from logging which changes the forest floor drying it out and compacting the hyphal mat which contains truffles, a food that the squirrel depends on. The hyphal mat if disturbed takes 40 years to regrow. The analysis fails to explain impacts to lichen in the trees above which is a major WVNFS food source. It fails to analyze the squirrel's use of tall trees (regardless of species) to navigate through the forest and does not discuss what happens to their ability to disburse or search for food if the trees are removed. The draft EA states that the project will impact WVNFS habitat on page 38 and could kill immature flying squirrels. What happens if there is a "take" of these squirrels? Will permits be required? The short-term impacts to the WVNFS which could last 40 or more years would remove habitat for 8 generations of squirrels. Would the squirrels ever return? This is not acceptable.

Timbering will simultaneously degrade the quality of the habitat and, by creating gaps in the forest and reducing the height of the trees, make it more difficult for WVNFS to reach more suitable habitat in the surrounding area. Habitat connectivity is crucial for long-term population viability of WVNFS, potentially more-so than the habitat quality within a particular isolated area.[9] WVNFS avoid crossing gaps, and will choose to detour around a clear cut even when the detour distance is many times longer.[10] Studies suggest that removing even half of the trees from a given area has a negative impact on flying squirrels, so the clear-cutting with reserves proposed

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[7] Holloway, GL; Smith, WP. 2011. A meta-analysis of forest age and structure effects on northern flying squirrel densities. Journal of Wildlife Management 75:668-674.

[8] Smith, W.P. 2012. Sentinels of Ecological Processes: The Case of the Northern Flying Squirrel. Bioscience, 62(11): 950-961.

[9] Loeb SC, Tainter FH, Cazares E. 2000. Habitat associations of hypogeous fungi in the Southern Applachians: Implications for the endangered northern flying squirrel (Glaucomys sabrinus coloratus). American Midland Naturalist 144: 286-296; Smith, WP; Person, DK, Pyare S. 2011. Source-sinks, metapopulations, and forest reserves: Conserving northern flying squirrels in the temperate rainforests of Southeast Alaska. Pages 399-422 in Liu J, Hull V, Morzillo AT, Wiens J, eds. Sources, Sinks, and Sustainability across Landscapes. Cambridge University Press.

[10] Smith, M.; Forbes, G.; Betts, M. 2013. Landscape configuration influences gap-crossing decisions of northern flying squirrel (glaucomys sabrinus). Biological Conservation, 168:176-183.

could have a severe impact.[11] Dense young forests also limit WVNFS' perceptual range, meaning that the early stages of regrowth will force WVNFS to spend more time searching for clues to guide them toward suitable forest habitat.[12]

Moreover, the draft EA allows for timbering year-round, with no precautions made for the critical breeding and nesting period of the WVNFS, from April to September. WVNFS young may not be mobile during this period, and although the draft Environmental Assessment suggested that adult WVNFS would be able to relocate and potentially even re-nest if they were disturbed by timbering activities, this is in no way certain. Disturbance and stress related to timbering, taking place at this critical time, could result in reduced survival for young WVNFS. If adult WVNFS are forced to relocate, that process could be costly in terms of energy, especially since the lack of suitable forest cover would force them to rely on inefficient quadrupedal locomotion.[13] Relocation would also increase the risk of predation, due to the need to cross open areas, potentially move in daylight, and use inefficient quadrupedal locomotion.

The delisting of the WVNFS occurred with the explicit condition and expectation that the Monongahela National Forest would protect the WVNFS as though it was still listed as endangered and also consider it as a Management Indicator Species (MIS). The 2006 Forest Plan (revised in 2011) under Forest-wide Management Direction TE64 calls on the Forest Service only to "conduct vegetative management activities … to determine if (such) activities would contribute to the recovery of the species." Or "to improve or maintain WVNFS habitat … after research has demonstrated the beneficial effects of such management." The research being plan here is acoustic monitoring, which can only tell if a squirrel has made a call in the area. It doesn't count squirrel numbers, or try to explain population size, or if the squirrel will remain in the area.

Friends of Blackwater has sent several important papers on the WVNFS's natural history to the Monongahela National Forest. It does not appear that any of these detailed scientific papers have been used in the analysis of impacts to the WVNFS from logging etc. We urge the Forest to consider these and other sources as part of the NEPA process and reexamine the impacts of the proposed project on the species.

D. Conclusion

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[11] Holloway, G.L.; Smith, W. P.; Halpern, C.B.; Gitzen, R.A.; Maguire, C.C.; West, S.D. 2012. Influence of forest structure and experimental green-tree retention on northern flying squirrel (Glaucomys sabrinus) abundance. Forest Ecology and Management. 285: 187-194.

[12] Flaherty EA, Smith WP, Pyare S, Ben-David M. 2008. Experimental trials of the northern flying squirrel (Glaucomys sabrinus) traversing managed rainforest landscapes: Perceptual range and fine-scale movements. Canadian Journal of Zoology 86: 1050-1058.

[13] Flaherty, E. A., M. Ben-David, and W. P. Smith 2010. Quadrupedal locomotor performance in two species of arboreal squirrels: Predicting energy savings of gliding. Journal of Comparative Physiology B 180: 1067-1078.

As currently formulated, the proposed project will have unacceptable impacts to the WVNFS and its habitat. We urge the Forest Service reconsider this proposed project and pursue an alternative that eliminates regeneration harvests and makes recovery of the WVNFS a top priority.

Thank you for the opportunity to comment on this proposal. Please make these comments part of the official record for this project. Also, please send us all future notices for this project.

Sincerely,

Judith S Rodd
Director
Friends of Blackwater Canyon

Jason Totoiu
Senior Attorney
Center for Biological Diversity