



October 18, 2018

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RE: Comments on the Spruce Mountain Grouse Management Area Project and Draft Environmental Assessment

Dear Mr. Waskey:

The Center for Biological Diversity and Friends of Blackwater Canyon appreciate the opportunity to submit the following comments on the Spruce Mountain Grouse Management Area Project and Draft Environmental Assessment (EA). We urge the Forest Service to abandon the proposed project.

The **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.

Friends of Blackwater (“FOB”) is a non-profit conservation organization working to protect biodiversity in the Mid-Atlantic Appalachian Highlands. FOB has 4,000 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.

I. SUMMARY

The proposed project would likely cause significant and irreparable harm to instream habitats, negatively impact management indicator species and vulnerable species including the Northern Flying Squirrel and result in the “take” of federally listed bat species, which already face extinction due to white nose syndrome and other threats.

The National Environmental Policy Act (NEPA) provides an important framework for developing and selecting alternatives that would reduce these impacts. Rather than utilizing NEPA to do this, the draft EA contains only a no-action alternative and a proposed action alternative and appears to have been formulated to justify the selection of this environmentally damaging proposed action. Among many other problems, the draft EA fails to evaluate a “range” of reasonable alternatives; fails to meaningfully evaluate the project’s adverse impacts to fish and wildlife; and fails to meaningfully evaluate the mitigation measures the Forest Service references in the document. Due to the number of federally listed species that will likely be adversely affected by the proposed project, the Forest Service must engage in formal consultation with U.S. Fish & Wildlife Service under the Endangered Species Act (ESA). The Center and FOB urge the Forest Service to abandon the proposed project.

II. DISCUSSION

A. The Draft Environmental Assessment Does Not Satisfy the Requirements of the National Environmental Policy Act.

NEPA requires that an EA identify the full scope of direct, indirect, and cumulative impacts of a proposed action and determine whether there are less damaging ways to achieve the project purpose. As discussed below, the draft EA fails to satisfy these fundamental requirements.

1. The Draft EA Purpose and Need Statement Is Unreasonably Narrow and Improperly Precludes the Formulation of a Range of Reasonable Alternatives.

NEPA planning begins with an identification of the purpose and need for a project. NEPA’s implementing regulations provide that an environmental document should specify the underlying purpose and need to which the agency is responding in proposing the alternative including the proposed action.¹ An appropriate statement of purpose and need is crucially important to the adequacy of the EA because the purpose and need statement “delimit[s] the universe of the action’s reasonable alternatives.”² Therefore, an agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the goals of the agency’s action, and the EA “would become a foreordained formality.”³

¹ 40 C.F.R. § 1502.13 (emphasis added).

² *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991).

³ *Id.*

Although an agency has some discretion in crafting a purpose and need statement, it must be reasonable in light of the statutory mandate under which the action is proposed.⁴ Here, the statutory mandate under which the action is proposed is the National Forest Management Act of 1976. NFMA requires the consideration of ecosystem health in planning and project decisions. More specifically, management plans under NFMA must be in accordance with NEPA and must provide for wildlife and fish; provide for diversity of plant and animal communities; ensure timber harvesting will occur only where water quality and fish habitat are adequately protected from serious detriment; ensure clearcutting and other harvesting will occur only where it may be done in a manner consistent with the protection of soil, watersheds, fish, wildlife, recreation, aesthetic resources and regeneration of the timber resource.⁵

A purpose and need statement must also consider the “views of Congress, expressed, to the extent that an agency can determine them, in the agency’s statutory authorization act, *as well as in other Congressional directives.*”⁶ These and other Congressional directives include many that require and/or promote the protection of watersheds, fish and wildlife resources, and endangered species, including:

- The National Environmental Policy Act of 1970. NEPA directs the “Federal Government to use all practicable means” to, among other things: 1) “fulfill the responsibilities of each generation of trustee of the environment for succeeding generations,” (2) ensure “safe, healthful, productive” surroundings for all Americans; and 3) “attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.”⁷ NEPA states that the policies, regulations, and laws of the United States “shall be interpreted and administered in accordance with the policies set forth in this Act.”⁸ NEPA further provides that “policies and goals set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies.”⁹
- The Endangered Species Act of 1973. The ESA commands all federal agencies to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of an endangered species or result in the destruction or modification of habitat of such species.¹⁰ Federal agencies must also utilize their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered species and threatened species.¹¹ The term “conservation” is synonymous with the recovery of a species.¹²

⁴ See *Westlands Water Dist. v. U.S. Dep’t of Interior*, 376 F.3d 853, 866 (9th Cir. 2004) (“Where an action is taken pursuant to a specific statute, the statutory objectives of the project serves as a guide by which to determine the reasonableness of objectives outlined in an EIS.”).

⁵ See 16 U.S.C. §§ 1600-1614.

⁶ *Busey*, at 196.

⁷ 42 U.S.C. § 4331(b).

⁸ *Id.* § 4332(1).

⁹ *Id.* § 4335.

¹⁰ 16 U.S.C. § 1536 (a)(2).

¹¹ *Id.* §1536(a)(1).

¹² See *id.* § 1532(3).

- The Clean Water Act of 1972. The Clean Water Act seeks to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”¹³ It directs all federal agencies to meet water quality standards.¹⁴

The draft EA states, “the purpose of this project is to create and maintain ruffed grouse habitat within the Spruce Mountain Grouse Management Area (GMA). Ruffed grouse need a variety of specific habitat components to be most successful. Optimizing vegetation diversity will enhance ruffed grouse’s ability to thrive throughout the year.”¹⁵ The statement continues with a detailed list of desired habitat components. These components include:

- Early successional forest habitat, which is young forested or areas with high numbers of woody stems, to offer protection from predators and provide food. Where harvest occurs, dense regrowth will provide this component.
- Shrubs and small trees, such as blueberry, dogwood, elderberry, woody viburnum species, sumac, and deciduous holly can also provide cover and food sources.
- Mature mixed forests with hard and soft mast producing species, such as black cherry, American beech, birch, maple, serviceberry, and oak, provide year around food.
- Open fields and existing linear features (old skid trails, gas pipelines, utility corridors) with herbaceous vegetation provide food and bugging areas for young grouse, or broods to feed. A variety of cool season grasses (broom sedge, bluestem, purpletop, Canada wild rye) and forbs (black-eyed Susan’s, firepink, goldenrod, poverty oat grass) also provide feeding and brood rearing areas.
- Conifer patches (spruce and hemlock) provide cover during winter months.
- Water sources available throughout the year, such as seeps and wetlands.¹⁶

The draft EA further states that “the development of the alternatives for this project were driven by what conditions need to change within the project area to meet these specific objectives.”¹⁷

The purpose and need statement in the draft EA is deficient because it is so narrowly constructed that it limits the analysis of alternatives to a single action alternative that focuses solely on improving ruffed grouse habitat. Any alternative that does not include projects narrowly tailored to achieve the enumerated desired habitat components has been excluded from consideration. The purpose and need statement also fails to incorporate the critically important Congressional directives in NFMA, NEPA, and the ESA, and call for the protection of watersheds, the diversity of plant and animal communities, and the conservation (i.e. recovery) of endangered species. Consequently, the purpose and need statement is contrived so narrowly that it defines any

¹³ 33 U.S.C. § 1251(a).

¹⁴ *See id.* § 1323(a).

¹⁵ Draft EA at 4.

¹⁶ *Id.*; BA at 16.

¹⁷ Draft EA at 4.

competing reasonable alternatives out of consideration (or in this case existence), thereby frustrating the ability of the EA to fulfill its role under NEPA.¹⁸ The purpose and need statement must reflect a broader understanding and consideration of these principles of ecological health (beyond the purported benefits to a single game species) so as to ensure that other reasonable alternatives can be considered.

2. The Draft EA Does Not Evaluate Highly Reasonable Alternatives.

NEPA requires a “detailed statement” of “alternatives to the proposed action.”¹⁹ This is the “heart” of the environmental assessment.²⁰ The alternatives analysis should address “the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for the choice among options by the decisionmaker and the public.”²¹ This analysis must “rigorously explore and objectively evaluate all reasonable alternatives.”²² This requires a “thorough consideration of all appropriate methods of accomplishing the aim of the action” and an “intense consideration of other more ecologically sound courses of action.”²³

The purpose of this section is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means.”²⁴ While an agency is not obliged to consider every alternative to every aspect of a proposed action, reviewing courts have insisted that the agency “consider such alternatives to the proposed action as may partially or completely meet the proposals goal.”²⁵

The draft EA only considers the proposed project and the effects of taking no action at all. The document offers the Forest Service and the public with no other less environmentally damaging alternative against which they can compare the proposed project. By considering in detail only one action alternative, this document fails to “provid[e] a clear basis for choice among options by the decisionmaker and the public.”²⁶ Courts have invalidated environmental reviews under NEPA that consider only one action alternative or put forth only substantially similar alternatives for consideration.²⁷

Several reasonable alternatives clearly exist. The Forest Service could reduce the number of acres that will be clear cut, reduce the scope of hard wood crop-tree release, spruce release, and mulcher activities, and reduce the number of haul roads, skid trails, and landings called for in the proposed project. Further, alternatives that result in far less aggressive early successional habitat

¹⁸ See *Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997).

¹⁹ 42 U.S.C. § 4332(2)(c).

²⁰ 40 C.F.R. § 1502.14.

²¹ *Id.*

²² 40 C.F.R. § 1502.14(a)(emphasis added).

²³ *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974).

²⁴ *Id.*

²⁵ *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d. 79, 93 (2^d Cir. 1975).

²⁶ 40 C.F.R. § 1502.14.

²⁷ See *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 813 (9th Cir. 1999); *Curry v. U.S. Forest Service*, 988 F.Supp. 541 (W.D. Penn. 1997).

gains, provide greater scenic integrity,²⁸ would minimize the spread of invasive plant species, call for less logging in areas at high risk for erosion, and result in far less drastic increases in stream flows could all be considered in the draft EA. West Virginia northern flying squirrel habitat could be removed from the logging project. Some of these alternatives or a combination thereof may very well achieve the stated purpose of the proposed project but accomplish it in a manner that is far less damaging than the approach being proposed.

The draft EA did not examine any one of these measures, much less a combination of these approaches, to reduce the project's impacts to the watershed, plant and animal communities, and endangered and threatened species. Instead, the Forest Service considered only the proposed action-one that was narrowly tailored to achieve the specific objectives set forth in the purpose and need statement. The Forest Service's failure to consider a single action alternative to the proposed project, coupled with more than 100 pages dedicated to discussing the proposed action in comparison to taking no action at all, appears designed to justify a pre-selected course of action. NEPA requires more than this "all or nothing" approach and the Draft EA must rigorously explore and objectively evaluate a full range of alternatives that have less damaging effects on the ecosystem.²⁹

3. The Draft EA Does Not Adequately Consider the Environmental Impacts of the Proposed Project.

"NEPA imposes procedural requirements designed to force agencies to take a 'hard look' at [the] environmental consequences" of their actions.³⁰ In comparing and analyzing potential alternatives, the draft EA must examine the direct, indirect, and cumulative impacts of the different alternatives, the conservation potential of those alternatives, and the means to mitigate environmental impacts.³¹ A thorough analysis of the project's impacts is essential for determining whether less environmentally damaging alternatives are available. The draft EA fails to adequately evaluate a host of environmental impacts, as discussed more fully below.

a. The Draft EA Does Not Establish Baseline Conditions.

The Forest Service is required to "describe the environment of the areas to be affected or created by the alternatives under consideration."³² The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. "Without establishing... baseline conditions . . . there is simply no way to determine what effect [an action] will have on

²⁸ The Forest Service acknowledges that within the project area, areas are rated as low and moderate scenic integrity, which according to the agency is "both unacceptable and inconsistent" with the Forest Plan. Draft EA at 31. The draft Environmental Assessment states that some timber harvest actions such as clear cuts may be visible from the visitor platform at Spruce Knob. In addition, noise from timbering may be noticeable to visitors at Spruce Knob Lake. The Spruce Knob National Recreation Area is a popular, nationally recognized tourist destination, and it would be best to minimize the potential impacts on the viewshed and visitor experience. Any positive economic impact created by timbering could be negated if the project is damaging to the area's reputation as an outdoor recreation destination.

²⁹ See *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F.Supp. 908, 933 (D. Or. 1977) ("The discussion of alternatives must be undertaken in good faith; it is not to be employed to justify a decision already reached.").

³⁰ *Earth Island Inst. v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003).

³¹ See C.F.R. §§ 1508.16, 1502.25(c).

³² *Id.* § 1502.15.

the environment, and consequently, no way to comply with NEPA.”³³

The Draft EA fails to provide a complete environmental baseline against which the agency can compare the effects of the proposed project and other alternatives. Perhaps the most glaring omission is the lack of baseline data for the ruffed grouse—the very species the proposed project is intended to help. The Draft EA contains only generalized statements about how “ruffed grouse populations will decline without active forest management”³⁴ and how “ruffed grouse numbers are likely to decline” if no action is taken³⁵. The draft EA contains no population estimates for ruffed grouse in the project area or any other data regarding the status of the species and current and future trends. Without such data, the very premise that ruffed grouse numbers will decline without further action is mere conjecture. Without complete baseline information for the ruffed grouse, the public has no assurances that the Forest Service took a hard look at the project and that the benefits of the proposed project justify its environmental costs.³⁶

As discussed later the draft EA also lacks important baseline information for management indicator species (i.e. brook trout) and aquatic indicator species (i.e. Pearl dace). This information is critical to help inform the Forest Service and the public about the impacts this project will have on both the species and their habitats. It also lacks important baseline information on the candy darter and inexplicably excludes the eastern hellbender from the document entirely.

b. *The Draft EA Does Not Meaningfully Evaluate the Impacts of Runoff, Sedimentation, and Erosion.*

The draft EA states that a detectable change in streamflow/runoff occurs when 20% or more of the basal area in a catchment is removed by all vegetative treatments combined.³⁷ The draft EA states that in this project approximately 34% of the basal area will be removed from the project area, with 36%, 31%, and 16% basal area removal on the Devers, Werner, and Big Run catchments, respectively.³⁸ The draft area recognizes that “measurable increases in stream flows are likely” in the Devers and Werner catchments, but the analysis appears to end there. No consideration is given to the impacts arising from those activities that remove 100% of the basal area within a specific area of the catchment. These practices, which include clear-cuts, new wildlife openings, expansions of existing openings, skid trails, and log landings, have great potential to affect stream flows.³⁹ Questions remain regarding the localized impacts of 100% basal removal in a particular area. Further, there is little if any analysis to support the Forest Service’s conclusion that “although the increase in stream flows are expected to be measurable, the amount of increases are still anticipated to be small and not problematic, even under the worst-case scenario of all harvesting activities during a single year.”⁴⁰ Aside from dry periods when stream flows are at their lowest, no explanation is provided as to how increased flows

³³ *Half Moon Bay Fisherman’s Marketing Ass’n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988).

³⁴ Draft EA at 6.

³⁵ *Id.* at 11.

³⁶ See *Center for Biological Diversity v. Bureau of Land Management*, 422 F.Supp.2d 1115, 1163 (N.D. Cal. 2006).

³⁷ Draft EA at 54.

³⁸ *Id.* at 57.

³⁹ *Id.* at 54.

⁴⁰ *Id.* at 57-58.

would not have a significant impact the rest of the year. There is also no explanation as to why the Forest Service believes that because harvesting would occur over “multiple” years, the harvesting of previous years would have time to “partially recover” before the next harvest occurs, thus decreasing any potential for measurable storm flow increases. It is not clear what “partially recover” even means.

In addition, the draft EA recognizes that roads, skid trails, and landings can have long-term consequences for soil erosion and sediment delivery to the stream system.⁴¹ The Forest Service appears to rely on general practices to mitigate the potential impacts of this project by citing the need to limit roads to the “minimum necessary to perform management activities”, “properly locating and designing roads” to reduce their impact, applying appropriate BMPs and construction standards, and regularly maintaining them. Based on these BMPs and design features the Forest Service concludes that impacts to aquatic, riparian, and hydrologic resources will be kept to an “acceptable level.” The Forest Service fails to explain what “acceptable” means and how these practices, when applied in this specific instance, will mitigate the impacts of nearly a half mile of new roads. Further, the assertion that “overall direct impacts to stream and riparian functions are expected to be short-lived and not substantial” is without support and is belied by the fact that continuous forest management activities are contemplated in this area.

The impacts from skid trails and skid roads appear to be even more significant. This system of haul roads, skid roads, and landings “are the largest source of sediment in forested environments.”⁴² Here, approximately 10 miles of skid roads are proposed in this project.⁴³ The Draft EA explains that skid roads should be decommissioned and the expectation is that decommissioned skid roads are not expected to contribute to longer term impacts.⁴⁴ When left on the landscape, however, they can have a myriad of damaging impacts including increased erosion and sediment delivery, altered natural hydrologic flow patterns for both surface water and shallow groundwater, and diminished resource productivity in the area.⁴⁵ Unlike classified roads, skid roads are not expected to be regularly monitored and maintained.⁴⁶ Despite these numerous impacts, the draft EA essentially ends its analysis without any assurances that these skid roads would be decommissioned. With the prospect that additional harvests will be pursued in future years, it should otherwise be assumed that these roads will remain on the landscape and therefore the Forest Service must examine the site-specific impacts these roads will have on the area and watershed. The fact that the Draft EA later concludes that “skid roads likely represent the greatest permanent change to the landscape and thus represent the greatest potential for cumulative, long-term impacts to hydrologic and/or aquatic resources”⁴⁷ should give the Forest Service great pause and compel the consideration of alternatives that would minimize such impacts.

Further, it is expected that there will be ten acres of log landings. The Forest Service finds:

⁴¹ Draft EA at 58.

⁴² *Id.* at 59.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.* at 62.

Erosion and sedimentation are serious concerns due to the bare ground that is exposed unprotected from erosion. Newly constructed landings can be associated with greater risks for adverse effects to the aquatic ecosystem (hydrologic modification and sediment production) than pre-existing landings since construction of new landings typically involves considerably more soil disturbance and alteration to an existing natural environment.⁴⁸

Yet, much like the cursory analysis given to new roads and skid roads, the discussion of the impacts of these log landings ends there other than to say that 4 of the 20 landings will be proposed for conversion to wildlife openings. One must otherwise expect that the remaining 16 landings will be long-term fixtures across the landscape and these impacts must be further examined by the agency.

- c. *The Draft EA Does Not Meaningfully Evaluate Impacts to Aquatic Management Indicator Species and Regional Forester Aquatic Sensitive Species.*

Brook Trout

The Draft EA's analysis of the impacts to wild brook trout leaves far more questions than answers. The document states, "Existing roads would add to effects occurring from proposed actions, creating short-term stressors and long-term effects to wild brook trout. Stream sedimentation has the potential for the greatest risk of detriment [to] this species. Leaving features such as roads on the landscape increase the likelihood of erosion."⁴⁹ There is no further discussion, however, regarding the effects these roads, through erosion, runoff, and sedimentation, would have on the local and larger brook trout population and habitat in either the short or long term. No baseline population data for the species is provided or evaluated that would provide greater insight on the project's impacts. It is unknown to what extent water quality could be degraded, how this could impact feeding, reproduction, movement, etc. and what mitigation measures would be in place to protect the species. Further, although certain improvement projects are being proposed within the watershed under the proposed alternative, the Forest Service notes that these measures "are not capable of mitigating aquatic resource impacts associated with other issues such as increased stream sedimentation and altered hillslope hydrology that would arise from increased road densities" under the proposed project.⁵⁰ Moreover, because there is no indication that these roads will in fact be decommissioned, one must assume the impacts will be permanent and long-lasting. Accordingly, the Forest Service must provide a far more detailed discussion of the project's impacts to a species with such important conservation, recreation, and management considerations.

Pearl Dace

The Forest Service's analysis of the impacts to the pearl dace is similarly flawed and inadequate under NEPA. The Draft EA states that the proposed action could have implications to the

⁴⁸ Draft EA at 59.

⁴⁹ *Id.*

⁵⁰ Draft EA at 62.

viability of this population of pearl dace in the analysis area and have long-term effects that could further degrade habitat conditions with respect to stream sedimentation.⁵¹ As the Forest Service explains:

Reasons for this include the increase in road density (with consideration of skid roads) throughout the project and their lasting effects of stream sedimentation on aquatic habitat and water quality. The addition of 8 miles of skid roads to the existing 25 miles of skid roads that have the potential to increase stream sedimentation and further compromise the availability of quality habitat for pearl dace. This long-term source of sediment could have the ability for the species to trend in a declining manner because of the effects to habitat during different life stages. Sediment particles can begin to encroach into areas used for early rearing, causing a reduction in available slow water habitat. Climactic changes could lead to the rise of stream temperatures and reduction of available cold water habitat. These effects in addition to altered hillslope hydrology and artificial warming of groundwater are reasons to warrant the decision that these actions would likely adversely affect pearl dace.

Clearly, the Forest Service recognizes that the project could have long-term, adverse impacts to the pearl dace. But the analysis ends there and later concludes that even in view of the cumulative effects, the proposed action “may adversely impact individuals, but not likely to result in a loss of viability in the planning area, nor cause a trend toward federal listing” for the pearl dace.⁵² It is entirely unclear from the Draft EA why the Forest Service believes this is the case given the number of different impacts this project will likely have on the species. If the Forest Service is relying on future road decommissioning treatments to mitigate these new sources of “chronic impacts to the aquatic ecosystem,” such future treatments remain highly speculative.⁵³ NEPA demands more than conclusory statements and the Forest Service must provide a reasoned explanation for why it believes impacts to the pearl dace will not result in a loss of viability in the planning area or cause a trend toward federal listing.⁵⁴ Given the significance of these impacts it is all the more reason why the Forest Service needs to identify other reasonable, less harmful alternatives to the proposed action.

d. The Draft EA Does Not Meaningfully Evaluate the Impacts of Herbicides.

There is also little discussion concerning the potential impacts of herbicides to aquatic resources and species, particularly amphibians. Important details about the formulations, mobility, toxicity of the herbicides are missing from the Draft EA. Researchers are increasingly documenting the impacts to amphibians from glyphosate-based herbicides.⁵⁵ Given the extent of the proposed

⁵¹ Draft EA at 62.

⁵² *Id.* at 63.

⁵³ *See id.*

⁵⁴ *Seattle Audubon Soc’y v. Mosely*, 798 F.Supp. 1473, 1482 (W.D. Wash. 1992) (“[t]he agency may not rely on conclusory statements unsupported by data, authorities, or explanatory information.”); *Earth Island Inst. v. U.S. Forest Service*, 442 F.3d 1147, 1160 (9th Cir. 2006) (An agency has acted arbitrarily and capriciously when it fails to make a reasoned decision based on an evaluation of evidence).

⁵⁵ *See, e.g.,* Relyea, Rick A. 2012. New Effects of Roundup on Amphibians: Predators Reduce Herbicide Mortality; Herbicides Induce Antipredator Morphology. *Ecological Applications* 22(2): 634-47; Relyea, Rick A. 2005. The Lethal Impact of Roundup on Aquatic and Terrestrial Amphibians. *Ecological Applications* 15(4): 1118-1124.

project's herbicide treatments, and the already precarious position of aquatic resources with respect to the proposed project, impacts to aquatic resources need to be better examined. Places like Gandy Creek, which flows through important recreational sites, could also be the receiving area for waters potentially polluted by these chemicals. It remains unclear whether BMPs will be implemented and aquatic resources will not be impacted by over-spraying, drift, and migration. NEPA requires a consideration of these impacts to the "human environment."⁵⁶

e. The Draft EA Does Not Meaningfully Evaluate Impacts to the West Virginia Northern Flying Squirrel (WVNFS).

The draft EA states that "approximately 82 acres identified for regeneration harvest (including the 10-acre thinning unit) are within occupied West Virginia northern flying squirrel habitat."⁵⁷ Elsewhere in the document it is indicated that an additional 20 acres of West Virginia northern flying squirrel (WVNFS) habitat could be altered by associated activities such as wildlife opening creation or expansion, skid trail development, or cut back borders. In total, over 100 acres of WVNFS habitat could be disrupted, and the project is located close to several documented WVNFS capture sites. A WVNFS was captured within the project area in 1993, and there are 13 documented WVNFS occurrences within 2.5 miles of the project boundary, indicating a strong probability that the project area is used by WVNFS.

WVNFS are strongly associated with late successional forest characteristics, including snags, downed wood, large diameter trees, moist climate, and high canopies.⁵⁸ Decreasing mid to late successional habitat in favor of a 249% increase in early successional habitat,⁵⁹ 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.⁶⁰ 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.⁶¹ WVNFS are considered an indicator species for mature and uncut forest,⁶² partly because of their acute sensitivity to habitat fragmentation and disturbance.⁶³

⁵⁶ See 40 C.F.R. § 1508.14.

⁵⁷ Draft EA at 91.

⁵⁸ 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.

⁵⁹ See Draft EA at 29.

⁶⁰ 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.

⁶¹ Smith, WP. 2007. Ecology of *Glaucomys sabrinus*: Habitat, demography, and community relations. *Journal of Mammalogy* 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.

⁶² 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.

⁶³ Smith, W.P. 2012. Sentinels of Ecological Processes: The Case of the Northern Flying Squirrel. *Bioscience*, 62(11): 950-961.

The intensity of the timbering, which according to the draft Environmental Assessment will result in the removal of 34% of the basal area,⁶⁴ will simultaneously degrade the quality of the habitat and, by creating gaps in the forest, 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.⁶⁵ WVNFS avoid crossing gaps, and will choose to detour around a clear cut even when the detour distance is many times longer.⁶⁶ 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 could have a severe impact.⁶⁷ 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.⁶⁸

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.⁶⁹ 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. Further there are no assurances that certain "design features to prevent nest tree removal"⁷⁰ are actually required and would be implemented for this project.

The delisting of the West Virginia northern flying squirrel (WVNFS) was allowed with the explicit 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

⁶⁴ EA at 57.

⁶⁵ Loeb SC, Tainter FH, Cazares E. 2000. Habitat associations of hypogeous fungi in the Southern Appalachians: 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.

⁶⁶ Smith, M.; Forbes, G.; Betts, M. 2013. Landscape configuration influences gap-crossing decisions of northern flying squirrel (*glaucomys sabrinus*). *Biological Conservation*, 168:176- 183.

⁶⁷ 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.

⁶⁸ 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.

⁶⁹ 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.

⁷⁰ Draft EA at 94.

habitat ... after research has demonstrated the beneficial effects of such management.” There is no indication in the draft EA of what research is being planned on the impacts of timbering on WVNFS habitat, or what research specifically supports the assertion that the project will benefit the WVNFS by enhancing spruce habitat.⁷¹

f. The Draft EA Does Not Meaningfully Evaluate Impacts to Northern Long-Eared Bats.

The Biological Assessment for the project, prepared in 2018 states that “The Monongahela National Forest has determined that while the project may affect, and is likely to adversely affect the Northern long-eared bat, such take is not prohibited pursuant to the final northern long-eared bat 4(d) Rule.” Notwithstanding what allowances may be provided in the 4(d) rule, the Forest Service must still fully evaluate the project’s impacts to the species and identify less harmful alternatives to the proposed action under NEPA. A project that may not otherwise jeopardize the continued existence of a species may still have significant impacts and these impacts must be evaluated in an EIS.⁷² The Forest Service has neither meaningfully evaluated the entire scope of impacts to the NLEB nor has it identified less harmful alternatives.

Northern long-eared bats (NLEBs) were found in Stillhouse Cave, just .2 miles away from the project, in 1984 and 1992. There was also a NLEB sighting at the Sinks of Gandy, .5 miles away from the project, in 2000. Mist netting studies throughout the Monongahela National Forest indicate that NLEBs have a fairly wide distribution throughout the forest, although the steep decline in population caused by white nose syndrome has decreased their presence at all sample sites.

NLEBs are one of the species that have been hit hardest by white nose syndrome, resulting in their listing as threatened under the Endangered Species Act in 2015. Some eastern and mid-Atlantic hibernacula saw a 99% decline in NLEB after the arrival of white nose syndrome, resulting in localized extinctions.⁷³ In nearby western Virginia, researchers documented a 95% decline in NLEB capture during mist net surveys⁷⁴ compared to pre-white nose syndrome.

Given the large declines in NLEB populations and federally threatened status, it is imperative that forest management be protective of this species. However, the planned timbering would

⁷¹ See Draft EA at 91.

⁷² See *Sierra Club v. Norton*, 207 F. Supp. 2d 1310, 1335 (S.D. Ala. 2002) (stating that the “jeopardy” analysis is distinct from the “significant impact” standard of NEPA and explaining the importance of preparing an EIS where there is uncertainty about impacts to listed species); *National Wildlife Federation v. Babbitt*, 128 F. Supp. 2d 1274, 1302 (E.D. Cal. 2000) (requiring an EIS even though mitigation plan satisfied the requirements of the ESA); *Portland Audubon Society* 795 F. Supp. 1489, 1509 (D. Or. 1992) (rejecting agency’s request for the court to “accept that its consultation with the United States Fish and Wildlife Service under the Endangered Species Act constitutes a substitute for compliance with NEPA.”).

⁷³ Frick, W.F., S.J. Puechmaille, J.R. Hoyt, B.A. Nickel, K.E. Langwig, J.T. Foster, K.E. Barlow, T. Bartonick, D. Feller, A-J Haarsma, C. Herzog, I. Horacek, J. van der Kooij, B. Mulkens, B. Petrov, R. Reynolds, L. Rodrigues, C.W. Stihler, G.G. Turner, and A.M. Kilpatrick. 2015. Disease alters macroecological patterns of North American bats. *Global Ecology and Biogeography* 24(7): 741-749. doi: 10.1111/geb.12290.

⁷⁴ Reynolds, R.J.; Powers, K.E.; Orndorff, W.; Ford, W.M.; Hobson, C.S. 2016. Change in rates of capture and demographics of *Myotis septentrionalis* (Northern Long-eared Bat) in Western Virginia before and after onset of White-nose Syndrome. *Northeastern Naturalist* 23(2): 195-204.

make the project area less suitable for NLEBs, and some individual NLEBs could be directly harmed by tree felling and removal.

While many species of bats rely on snags for roosting, NLEBs also use live trees,⁷⁵ raising the possibility that timbering could bring down trees containing roosting bats. NLEBs are also at risk because of their habitat preferences, foraging in mature upland forest with a fairly closed canopy rather than forest openings that might be used by larger bats. NLEB are tolerant of complex forest structure and some degree of “clutter” in the understory, with a small enough wingspan to be able to maneuver in forest interior areas. Similarly, studies indicate that NLEB regularly roost in trees located in or below the forest canopy, keeping to their forest interior niche.⁷⁶ One comparative study of Indiana bats and northern long-eared bats found that the NLEBs were more likely to roost within intact forests to a statistically significant degree, while Indiana bats were more likely to be found roosting on forest edges.⁷⁷

NLEBs, like many other woodland bats, prefer to roost in larger diameter trees,⁷⁸ making it important to preserve mature forest. NLEBs are less likely to use large forest gaps and clear cut areas than intact forest,⁷⁹ although research is mixed on the impacts of less severe timber treatments. NLEBs avoided roosting in areas that had been subject to a shelterwood harvest in Indiana, indicating that their avoidance of harvested areas is not just limited to clearcuts.⁸⁰ An earlier study in Ontario indicated that the disruption to forest structure and truncated age classes that occur with timbering were detrimental to habitat for multiple species of bats, including NLEBs.⁸¹

Taken together, this strongly indicates that harvesting, by reducing canopy cover, forest interior area, and large diameter trees, will negatively impact NLEBs. Although white nose syndrome has been the primary driver for loss of NLEBs, forest fragmentation has also been identified as a contributing factor in their decline.⁸²

⁷⁵ United States Fish and Wildlife Service. 2015. Northern Long-Eared Bat (*Myotis septentrionalis*) Fact Sheet. Accessed at <https://www.fws.gov/midwest/Endangered/mammals/nleb/nlebFactSheet.html>

⁷⁶ Menzel, M.A.; Owen, S.F.; Ford, W.M.; Edwards, J.W.; Wood, P.B.; Chapman, B.R.; Miller, K.V. 2002. Roost tree selection by northern long-eared bat (*Myotis septentrionalis*) maternity colonies in an industrial forest in the central Appalachian mountains. *Forest Ecology and Management* 155(1-3): 107-114.

⁷⁷ Carter, T.C. and Feldhamer, G.A. 2005. Roost tree use by maternity colonies of Indiana bats and northern long-eared bats in southern Illinois. *Forest Ecology and Management* 219: 259-268.

⁷⁸ Silvis, A., Ford, W.M., Britzke, E.R. 2015. Day-roost tree selection by northern long-eared bats – What do non-roost tree comparisons and one year of data really tell us? *Global Ecology and Conservation* 3: 756-763.

⁷⁹ Patriquin, K.J. and Barclay, R.M. 2003. Foraging by bats in cleared, thinned and unharvested boreal forest. *Journal of Applied Ecology* 40: 646-657.

⁸⁰ Badin, H. 2014. Habitat selection and roosting ranges of northern long-eared bats (*Myotis septentrionalis*) in an experimental hardwood forest system. Master's Thesis. Retrieved from http://cardinalscholar.bsu.edu/bitstream/handle/123456789/198110/BadinH_2014-2_BODY.pdf;sequence=1

⁸¹ Jung, T.S.; Thompson, I.D.; Titman, R.D.; Applejohn, A.P. 1999. Habitat selection by forest bats in relation to mixed-wood stand types and structure in central Ontario. *The Journal of Wildlife Management* 63: 1306-1319.

⁸² Henderson, L. and Broders, H. 2008. Movements and resource selection of the northern long-eared *Myotis* (*Myotis septentrionalis*) in a forest-agriculture landscape. *Journal of Mammalogy* 89(4): 952-963; Cornman, A.M. 2014. A white paper on the northern long-eared bat, forest management, and threat interactions. Little River Band of Ottawa Indians Natural Resources Report No. 2014-2.

Again, no seasonal restrictions have been put in place to avoid timber activity impacting critical stages in the NLEB's life cycle, such as the maternity period. Female bats are more sensitive to fragmentation due to more stringent roosting requirements and greater resource needs related to reproduction, so they would be particularly vulnerable to the impacts of timbering.⁸³

In view of these impacts, it is imperative that the Forest Service identify alternatives that would minimize harm to NLEB's during all stages of the species life cycle.

g. The Draft EA Fails to Meaningfully Evaluate Impacts to the Indiana Bat.

The Draft EA must include and closely examine recent data regarding the effects of white nose syndrome to the Indiana Bat and other bat species. Surveys performed by the West Virginia Department of Natural Resources in Winter 2017 documented a 50.8% decline in Indiana bats and a 23.9% decline in tricolored bats since 2015. Hellhole, which has the largest concentration of endangered Indiana bats in the state, experienced a decrease of nearly 96%. The potential cumulative effects of white nose syndrome need to be more closely examined and alternatives need to be identified that would minimize impacts to this already imperiled species.⁸⁴

h. The Draft EA Fails to Consider Impacts to the Eastern Hellbender.

Absent from the Draft EA is any discussion of the project's impacts to the Eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*). The U.S. Fish and Wildlife Service is currently reviewing the species for listing under the Endangered Species Act, following a positive 90-day finding in 2011.⁸⁵ This large salamander is found throughout the Monongahela National Forest⁸⁶ The species is globally vulnerable and many populations have declined or have been eliminated by dams, sedimentation, water pollution, and overcollecting.⁸⁷ The principal threat is degradation of habitat, since it is a habitat specialist with little tolerance of environmental change. It breathes primarily through the skin and depends on cool, well-oxygenated, flowing water.⁸⁸ Given the significant erosion, runoff, and sedimentation impacts this project will likely have on local streams, the Forest Service must analyze the project's impacts to this imperiled species.

i. The Draft EA Does Not Meaningfully Evaluate Mitigation.

⁸³ Henderson, L. and Broders, H. 2008. Movements and resource selection of the northern long-eared Myotis (*Myotis septentrionalis*) in a forest-agriculture landscape. *Journal of Mammology* 89(4): 952-963.

⁸⁴ See West Virginia Division of Natural Resources Annual Report 2016-2017, pp. 96-97, available at http://wvdnr.gov/admin/PDF/DNRAnnualReport_2017.pdf.

⁸⁵ See U.S. Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Partial 90-day Finding on a Petition to List 404 Species in the Southeastern United States as Endangered for Threatened With Critical Habitat, Proposed Rule, 76 Fed. Reg. 59835-59862 (September 27, 2011).

⁸⁶ See Keitzer, S. Conor. 2007. Habitat Preferences of the Eastern Hellbender in West Virginia. Dissertation, available at, <https://mds.marshall.edu/cgi/viewcontent.cgi?article=1688&context=etd>.

⁸⁷ See NatureServe, *Cryptobranchus alleganiensis*, at <http://explorer.natureserve.org/servlet/NatureServe?searchName=Cryptobranchus%20alleganiensis>

⁸⁸ International Union for the Conservation of Nature (IUCN). 2004. Hellbender account.

“The discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA.”⁸⁹ There must be a “reasonably complete discussion of possible mitigation measures.”⁹⁰ Courts have required mitigation measures to be supported by substantial evidence in order “to avoid creating a temptation for federal agencies to rely on mitigation proposals as a way to avoid preparation of an EIS.”⁹¹ Mitigation measures are deemed insufficient when the agency fails to study the efficacy of the proposed mitigation, fails to take certain steps to ensure the efficacy of the proposed mitigation, or fails to consider alternatives in the event that the mitigation measures fail.⁹²

The Forest Service’s discussion of the proposed mitigation measures for this project is inadequate. The draft EA states that decommissioning of roads are necessary to mitigate new sources of chronic impacts to the aquatic ecosystem but it is not known whether any of these roads will in fact be decommissioned. It is further unclear if any of the mitigation measures in Appendix B will actually be implemented or if they are merely suggestions. The Forest Service must discuss these and other mitigation measures, study the efficacy of the proposed mitigation, and consider alternatives in the event that the mitigation measures are not implemented or otherwise fail.⁹³ Only then will the Forest Service be able to accurately determine whether the impacts of this project can be effectively mitigated so as to avoid a significant effect on the environment.

B. The Presence of Several “Significance Factors” Compels the Preparation of an EIS.

The Council on Environmental Quality (“CEQ”) has promulgated regulations to guide agencies in determining whether a proposed project will have “significant” impacts to the environment.⁹⁴ Whether an action will have a “significant” impact on the environment, thus warranting the preparation of an EIS, requires considerations of both “context” and “intensity.” “Context” means that the significance of an action must be analyzed in several different contexts (i.e. national, regional, and local significance of the action). “Intensity” refers to the severity of the impact. The CEQ regulations set forth several factors for the action agency to consider when evaluating intensity.⁹⁵ These factors include among others: (1) the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; (2) the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration; and (3) the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.⁹⁶ The presence of even

⁸⁹ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989); *see also* 1502.16(h) (stating that an EIS must contain “means to mitigate adverse environmental impacts”).

⁹⁰ *Id.* at 352.

⁹¹ *National Audubon Soc’y v. Hoffman*, 132 F.3d 7, 17 (2d Cir. 1997)(emphasis added).

⁹² *Id.*; *see also National Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, 734-35 (9th Cir. 2001) (holding that the agency could not issue a FONSI based upon mitigation measures because it “did not conduct a study of the anticipated effects of the mitigation measures, nor did it provide criteria for an ongoing examination of them or for taking any needed corrective action”); *Sierra Club v. Norton*, 207 F. Supp. 2d 1310 (S.D. Ala. 2002).

⁹³ *See generally, National Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722.

⁹⁴ *See* 40 C.F.R. § 1508.27.

⁹⁵ *Id.*

⁹⁶ *Id.*

just “one of these factors may be sufficient to require preparation of an EIS in appropriate circumstances.”⁹⁷

In this instance, the full scope and severity of impacts to the ecosystem remain uncertain due in large part to the lack of critical baseline information in the draft EA. Further, it appears the proposed project will serve as a precedent for future harvests to increase early successional habitat, despite the lack of knowledge regarding the severity of the impacts resulting from this project. Further, listed bat species and proposed species for listing may be killed or injured as a result of this project. As such, an EIS must be prepared to comply with NEPA.

C. The Endangered Species Act Requires Formal Consultation and a Biological Opinion.

Under the ESA, the threshold for triggering formal consultation is “very low” and “any possible effect...triggers formal consultation requirements.”⁹⁸ The Forest Service has determined that the project “may affect” and is “likely to adversely affect” the Indiana bat. Therefore, it must enter formal consultation with the U.S. Fish & Wildlife Service and a tier II Biological Opinion must be prepared with a project-specific incidental take statement pursuant to the 2006 Programmatic Biological Opinion for the Forest Plan Revision.⁹⁹ This is particularly important as Indiana Bat populations continue to decline due to white nose syndrome and other factors as discussed above.

In addition, the Draft EA and BA for this project fails to consider the project’s impacts to the candy darter, which the U.S. Fish & Wildlife Service proposed as “threatened” on October 4, 2017.¹⁰⁰ The BA and Draft EA state that the species has no documented occurrence in the project area. No explanation is given as to why the Forest Service believes this is the case. There are no references to any stream surveys, population data, or other information that support the Forest Service’s conclusion. The documents provide no further details about the species or the project’s impacts on the species. The Candy darter is known to occur in the Monongahela National Forest, although like many other populations elsewhere it is rapidly declining. The species is particularly vulnerable to habitat loss and degradation because it is sensitive to changes in water quality and temperature.¹⁰¹ The primary threats are siltation and turbidity from a variety of anthropogenic activities.¹⁰² Stream altering activities such as changes to the stream channel or bank from adding boulders or removing canopy which provide shade and bank stabilization severely negatively impact candy darters.¹⁰³ Chipps et. al. (1993) report that the darter is absent or diminished in

⁹⁷ *Ocean Advocates v. U.S. Army Corps of Engineers*, 402 F.3d 846, 865 (9th Cir. 2005).

⁹⁸ U.S. Fish & Wildlife Service and National Oceanic and Atmospheric Administration, Interagency Cooperation-Endangered Species Act of 1973, as amended, Final Rule, 51 Fed. Reg. 19, 949-19,950 (June 3, 1986).

⁹⁹ See Draft EA at 73; BA at 31.

¹⁰⁰ See U.S. Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Proposed Threatened Species Status for the Candy Darter, 82 Fed. Reg. 46197-46205 (Oct. 4, 2018).

¹⁰¹ West Virginia Division of Natural Resources. 2002. West Virginia Nongame Wildlife and Natural Heritage News, Rare Species at a Glance: Candy Darter. 18(4). Winter 2002.

¹⁰² Berkman, H.E. and C.F. Rabeni. 1987. Effect of siltation on stream fish communities. *Environ. Biol. Fishes* 18:285-294; Burkhead, N.M. and R.E. Jenkins. 1991. Fishes. Pp. 321-409 in: K. Terwilliger (ed.), *Virginia’s Endangered Species*. McDonald and Woodward Publishing Co. Blacksburg, Virginia.

¹⁰³ West Virginia Division of Natural Resources. 2002. West Virginia Nongame Wildlife and Natural Heritage News, Rare Species at a Glance: Candy Darter. 18(4). Winter 2002.

areas with excessive siltation.¹⁰⁴ As early as 1993, researchers noted a decline in populations in several streams within the national forest.¹⁰⁵ The Forest Service is implementing a variety of stream improvement projects to reduce sedimentation in local watersheds.¹⁰⁶ In view of the species proposed status as “threatened”, the significant erosion, runoff, and sedimentation that is likely to result from this project, and current measures intended to help improve local populations, the Forest Service must consult with the Fish & Wildlife Service regarding the project’s impacts to the species.

We urge the Forest to engage in formal consultation with the U.S. Fish & Wildlife Service regarding this project’s impacts to listed species and for the Service to prepare a biological opinion on this project.

Conclusion

As currently formulated, the proposed project will have unacceptable impacts to the local watershed, plant and animal communities, and federally listed species. We urge the Forest Service to abandon this proposed project and pursue an alternative that will have far less damaging impacts.

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,



Jason Totoiu
Senior Attorney
Center for Biological Diversity



Judith S Rodd
Director
Friends of Blackwater



Kate Leary
Executive Assistant/Outreach
Friends of Blackwater

¹⁰⁴ Chipps, S.R., Perry, W.B. and Perry, S.A. 1993. Status and distribution of *Phenacobius teretulus*, *Etheostoma osburni*, and "*Rhinichthys bowersi*" in the Monongahela National Forest, West Virginia. *Virginia Journal of Science* 44(1): 47-58.

¹⁰⁵ *Id.*

¹⁰⁶ See U.S. Fish and Wildlife Service, Species Status Assessment Report for the Candy Darter (*Etheostoma osburni*) (Sep. 2017).