April 15, 2019

Dan Olsen
Forest Supervisor
Daniel Boone National Forest
1700 Bypass Rd
Winchester, KY 40391

Submitted electronically to comments-southern-daniel-boone@fs.fed.us

RE: Comments on the Forest Plan Amendment Environmental Assessment

Dear Mr. Olsen:

The Center for Biological Diversity appreciates the opportunity to submit the following comments on the Forest Plan Amendment Environmental Assessment (EA) for the Daniel Boone National Forest.

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.

The proposed forest plan amendment would likely cause significant and irreparable harm to federally listed bat species, including the Indiana bat, Virginia big-eared bat, gray bat, and northern long-eared bat, which already face extinction due to white nose syndrome and other threats. We urge you to abandon those aspects of the proposed forest plan amendment that lift seasonal restrictions on tree-cutting and prescribed fire within federally listed bat habitat.

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

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 provide a sound

purpose and need for the proposed action, fails to evaluate a "range" of reasonable alternatives, and fails to meaningfully evaluate the project's adverse impacts to federally listed bat species. 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.

A. There is No Rational Basis for Lifting Seasonal Restrictions on Tree-Cutting in Federally Listed Bat Roosting and Foraging Habitat.

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]

The draft EA states in part:

> Need for the Proposal
>
> The DBNF was one of the first forests in the Southern Region to incorporate Forest Plan Standards to protect habitat for bats at a project level. Since the 2004 Forest Plan was signed, there is new information specific to bat habitat management, there are additional Threatened and Endangered species and Designated Critical Habitat, and new USFWS documents regarding definitions and hibernacula for bats. These have combined to create circumstances where the Forest Plan's direction needs to be updated. There is also a need to change some standards from project level to the DBNF landscape level.
>
> Significant Caves
>
> The five mile buffer around hibernaculum was intended to limit potential impacts to bats during the swarming period. However, it also eliminated three months of operations during some of the drier parts of the year. The buffer does not put a limit on the habitat conditions that could be created from a quarter mile up to five miles of the hibernaculum, it only limits the time of year the work could be done. Due to challenges in implementing work on the ground there is a need to remove seasonal plan standard restrictions to implement projects at the most appropriate time of year considering all species.[4]

[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*.
[4] United States Department of Agriculture, Forest Service, Forest Plan Amendment, Draft Environmental Assessment, Daniel Boone National Forest, Kentucky at 3-4 (Mar. 2019).

It is not entirely clear what "challenges" the Forest Service is referring to, but it appears the justification for removing the restrictive seasonal treatment dates is to further minimize the risk of adverse effects to listed aquatic species and critical habitats. According to the scoping notice, limiting vegetation management and maintenance work to the winter months increases project costs, reduces treated acreages, delays project implementation, and damages soil, water, and aquatic resources.[5] The Forest Service contends that risks could be minimized or eliminated if the seasonal restrictions are removed.

The purpose and need statement in the draft EA is arbitrary and capricious. The Forest Service does not provide any support for the statement that soil, waters, aquatic species, and critical habitats have been adversely affected by previous projects. Not only does the Forest Service recognize that best management practices have been included in past project planning to reduce the risk of adverse effects to aquatic species but EAs and supporting documents for several past projects in the Daniel Boone do not document any significant risks to aquatic species and their habitats from erosion, runoff, and sedimentation. These projects include the Greenwood Vegetation Management Project (2017), Spring Creek Vegetation Management Project (2015), Freeman Fork Oak Woodland Restoration Project (2014) and Upper Rock Creek Vegetation Management Project (2008), and the Group One Redbird River Project (2008).

For the Greenwood Vegetation Management Project, the Forest Service estimated that the cumulative percent stream sediment increases over current conditions are between 1.0 and 6.1 percent. These changes are often offset by other restoration projects and based on these increases the agency determined that there would be no measurable change in the Watershed Condition Rank or the Species Sediment Load index listed in the Forest Plan from this alternative.[6] Citing the location of the treatments and the use of BMPs, the Forest Service found that there would be negligible impacts to the blackside dace, Cumberland darter, and Cumberland arrow darter.[7]

In the case of the Spring Creek Vegetation Management Project, the Forest Service explained that there are "several reasons" why it is unlikely that changes in stream sedimentation will influence water quality, that it would be "very difficult to measure or detect" any change in sedimentation at any given point in the Redbird River, and "based on field work, water quality modeling, and best available science there would be no adverse effects to any of the hydrologic resources as a result of this undertaking if the provided recommendations are followed."[8] The Forest Service concluded that given that the project would contribute to less than 1% sediment increase the proposed project would have "negligible impacts" on the snuffbox.[9]

In its EA for the Freeman Fork Oak Woodland Restoration Project, the Forest Service explained "it would be very difficult to measure or detect the change in sedimentation at any given point in the receiving streams",[10] there would be no direct effects to the blackside dace and Cumberland darter, and the majority of any sedimentation would be filtered out before it reaches suitable

[5] Letter from Dan Olsen, Forest Supervisor, United States Department of Agriculture, Daniel Boone National Forest, February 23, 2018, available at https://www.fs.usda.gov/nfs/11558/www/nepa/108623_FSPLT3_4264715.pdf.
[6] Greenwood Vegetation Management Soil and Water Report, at 15 (Jan. 2017).
[7] Greenwood Vegetation Management Project EA at 51.
[8] Hydrology and Soils Report for the Spring Creek Vegetation Management Project, at 9, 12 (Oct. 2010).
[9] Spring Creek Vegetation Management Project EA at 30.
[10] Freeman Fork Oak Woodland Restoration Project EA at 3-5

habitat, reducing the likelihood for adverse indirect effects to the species and designated critical habitat.[11]

For the Upper Rock Creek Vegetation Management Project, the Forest Service concluded "it would be very difficult to measure or detect a change in sedimentation at any given point in Rock Creek, and any increases in sedimentation could be considered undetectable."[12] Because the closest cutting would occur .20 miles away from Rock Creek and BMPs would be incorporated, the Forest Service determined that "any sedimentation will likely be filtered out before it reaches the creek."[13] Accordingly, the Forest Service found the project would not pose a risk to the blackside dace, Cumberland elktoe, and the Cumberland elktoe's critical habitat.[14]

In the Group One Redbird River Project EA, the Forest Service stated that the "amount of sediment actually reaching an active stream is very minor"[15], that impacts to the snuffbox would be "minimal",[16] and water quality would unlikely be influenced by the project due to buffer strips and BMPs.[17]

These EAs and supporting documents belie the assertions made by the Forest Service that seasonal logging restrictions must be lifted to better protect aquatic species and their habitats. Further, in a March 21, 2018 letter to the agency, the U.S. Fish and Wildlife Service stated that "it is not clear on the intended purpose of some of the replacement Forest Plan standards" and that the Daniel Boone National Forest should "provide the rationale and supporting science for each replacement standard prior to finalizing the proposed action."[18]

Either the Forest Service has downplayed or underestimated the significance of the impacts to these species and their habitats resulting from all these projects over the course of the last decade or the agency is not being entirely candid about its reasons for lifting seasonal restrictions on tree-cutting in bat habitat. If it is the former, the agency would likely need to prepare supplemental environmental reviews under NEPA and reinitiate consultation under the ESA for these past projects based on this new information.[19] If it is the latter, the Forest Service must

[11] *Id*. at 3-75, 3-78.
[12] Upper Rock Creek EA at 3-5.
[13] *Id*. at 3-53.
[14] *See id*. at 3-62, 3-64, 3-65, 3-68.
[15] Group One Redbird River Project EA at 48.
[16] *Id*. at 57.
[17] *Id*. at 67.
[18] Letter from Virgil Lee Andrews, Jr., Field Supervisor, U.S. Fish and Wildlife Service to Dan Olsen, Forest Supervisor, Daniel Boone National Forest, (Mar. 20, 2018).
[19] A supplemental EA or EIS is required if: (1) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (2) *there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts*. 40 C.F.R. § 1502.9 (emphasis added). Reinitiation of formal consultation is required under the Endangered Species Act and shall be requested by the Federal agency or by the U.S. Fish and Wildlife Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) *If new information reveals effects of the action that may affect listed species*; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action. 50 C.F.R. § 402.16 (emphasis added). Furthermore, once the agencies reinitiate consultation, the action agency, shall not make any irretrievable commitment of resources

reveal the true purpose and need for lifting these restrictions as the statement appears to be merely a pretext for establishing a precedent to allow for future, more intensive logging based on the limited information provided to date.

Moreover, the purpose and need statement is so narrowly constructed in that it limits the analysis of alternatives to a single action alternative that focuses on lifting seasonal restrictions on tree-cutting in bat habitat, despite the lack of scientific support for the proposal. Any alternative that retains seasonal restrictions has been excluded from consideration. Consequently, the purpose and need statement is contrived so narrowly that it defines any competing reasonable alternatives out of consideration, thereby frustrating the ability of the EA to fulfill its role under NEPA.[20] The purpose and need statement must reflect the actual risks posed to aquatic species from retaining the current seasonal tree cutting restrictions, and as explained below, the risks posed to several listed bat species from lifting the current restrictions, so as to ensure that other reasonable alternatives can be considered.

B. The Draft EA Does Not Evaluate Highly Reasonable Alternatives to the Proposed Plan Amendment.

NEPA requires a "detailed statement" of "alternatives to the proposed action."[21] This is the "heart" of the environmental assessment.[22] 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."[23] This analysis must "rigorously explore and objectively evaluate all reasonable alternatives."[24] This requires a "thorough consideration of all appropriate methods of accomplishing the aim of the action" and an "intense consideration of other more ecologically sounds courses of action."[25]

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."[26] 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."[27]

The draft EA only considers the proposed plan amendment 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 amendment. By considering

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with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent measures which would not violate subsection (a)(2) of this section. 16 U.S.C. § 1536(d).

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

[21] 42 U.S.C. § 4332(2)(c).

[22] 40 C.F.R. § 1502.14.

[23] *Id.*

[24] 40 C.F.R. § 1502.14(a)(emphasis added).

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

[26] *Id.*

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

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."[28] Courts have invalidated environmental reviews under NEPA that consider only one action alternative or put forth only substantially similar alternatives for consideration.[29]

Several reasonable alternatives clearly exist. For example, the Forest Service could maintain the seasonal restrictions and hibernaculum and roost tree protections currently in place while updating certain definitions to be consistent with current U.S. Fish and Wildlife Service terminology. Further, if impacts to aquatic species and their habitats are truly a concern, the Forest Service could include other means of minimizing these impacts rather than allowing for tree cutting at different times of the year. These measures could include more protective buffers and BMPs, better monitoring, and a more rigorous application of adaptive management if monitoring data reveals that tree cutting performed outside of the swarming season are adversely affecting aquatic species and their habitats. Some of these alternatives or a combination thereof may very well achieve the stated purpose of the proposed plan amendment 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 plan amendment's impacts to federally listed bat 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 plan amendment, coupled with 60 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 harmful effects on the ecosystem.[30]

C. The Draft EA Does Not Adequately Consider the Environmental Impacts of the Proposed Plan Amendment.

"NEPA imposes procedural requirements designed to force agencies to take a 'hard look' at [the] environmental consequences" of their actions.[31] 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.[32] A thorough analysis of the plan amendment'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.

1. <u>The Draft EA Does Not Establish Baseline Conditions</u>.

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[28] 40 C.F.R. § 1502.14.
[29] *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).
[30] *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.").
[31] *Earth Island Inst. v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003).
[32] *See* C.F.R. §§ 1508.16, 1502.25(c).

The Forest Service is required to "describe the environment of the areas to be affected or created by the alternatives under consideration."[33] 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 the environment, and consequently, no way to comply with NEPA."[34]

The Draft EA fails to provide a complete environmental baseline against which the agency can compare the effects of the proposed plan amendment and other alternatives. Perhaps the most glaring omission is the lack of baseline data for the bat species that will be impacted by lifting the seasonal tree cutting restrictions currently in place. These bat species include the Indiana Bat, northern long-eared bat (NLEB), Virginia big-eared bat, and gray bat. The Draft EA contains only generalized statements regarding the acreage of forested habitat suitable for bat roosting and foraging on the Daniel Boone.[35] Perhaps the lack of information is not surprising given the lack of bat surveys and monitoring performed on the forest. The U.S. Fish and Wildlife Service noted in its March 21, 2018 letter that "the majority of the DBNF has not been surveyed for summer occupancy by listed bat species" and that "given the number of Indiana bats and northern long-eared bats that occupy the DBNF hibernacula during the winter, it is reasonable to assume that there are numerous other colonies present that have not been documented that could be negatively impacted by future actions." The Forest Service appears to also acknowledge in the EA that surveys have been limited.[36] The draft EA contains no population estimates for these species in the forest or any other data regarding the status of the species and current and future trends. Without this data, the very premise that these species will not be adversely affected by the changes set forth in the plan amendment is mere conjecture.

This is particularly troublesome given the precipitous decline in bat populations across the eastern United States caused by white nose syndrome (WNS), which isn't even mentioned in the EA. Since WNS was first documented in New York state in the winter of 2006-2007, the fungus has killed an estimated 5.7-6.7 million bats of seven species, including the Indiana bat. Nationwide as of 2017, there were an estimated 559,781 Indiana bats,[37] which is 300,000+ fewer bats than in 1967 when the species was listed.[38] According to a November 2018 FWS report Kentucky has experienced a more than 10% decline in the Indiana bat population over the past two years.[39]

Without complete baseline information for these species, the public has no assurances that the Forest Service took a hard look at the proposed plan amendment's impacts to these already

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[33] *Id.* § 1502.15.
[34] *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988).
[35] Draft EA at 24.
[36] *Id.*
[37] U.S. Fish and Wildlife Service, 2017 Indiana Bat (*Myotis sodalis*) Population Status Update, (Nov. 13, 2018) available at https://www.fws.gov/Midwest/endangered/mammals/inba/pdf/2017_Population_Stats_Indiana_Bat_Revised_%2013Nov2018.pdf.
[38] *See* U.S. Fish & Wildlife Service, Indiana Bat (Myotis sodalis) 5-Year Review: Summary and Evaluation, U.S. Fish and Wildlife Service, Midwest Region-Region 3, Bloomington Ecological Services Field Office, at 5 (Sept. 2009).
[39] 2017 Indiana Bat Population Status Update.

dwindling populations and that the benefits of the proposed plan amendment justify its environmental costs.[40]

2. The Draft EA Fails to Meaningfully Evaluate the Direct, Indirect, and Cumulative Impacts to the Indiana Bat.

The EA is woefully deficient in its assessment of the impacts of the proposed plan amendment on the Indiana bat. The proposal will likely have a host of direct, indirect, and cumulative impacts and should be abandoned. Further, because the Forest Service has failed to address these impacts in the EA and appears positioned to rely solely a consultation process that does not provide an opportunity for public comment, the agency has thwarted a central tenant of NEPA which is to make the public aware of the environmental impacts of a proposed project and provide persons a meaningful opportunity to participate in the decision-making process.[41]

The Impacts of Removing DB-WLF-8, 9, and 10:

DB-WLF-8 currently prohibits tree cutting within 2.5 miles of any Indiana bat maternity colony from May 1 through August 15.[42]

DB-WLF-9 states that for non-vegetation management projects, currently suitable Indiana bat roost trees may be felled only from October 15 through March 31, if they are more than five miles from a significant bat cave (Indiana bat). If tree removal occurs at other times, the trees must be evaluated for current Indiana bat use, according to U.S. Fish and Wildlife Service protocol.[43]

DB-WLF-10 states that for non-vegetation management projects, removal of currently suitable roost trees (Indiana bat) within five miles of a significant bat cave (Indiana bat) may occur only from November 16 through March 15. If removal occurs at other times, the trees must be evaluated for current Indiana bat use, according to U.S. Fish and Wildlife Service protocol.[44]

The proposed forest plan amendment would remove DB-WLF-9 and DB-WLF-10. DB-WLF-8 would also be removed and replaced with DB-WLF-5, which prohibits tree cutting for new construction projects during June and July within "known maternity habitat" unless consultation with the FWS is conducted.[45] Construction projects include new system roads, trails, recreation, and administrative sites that would result in "permanent loss of habitat."[46] The Forest Service would also add DB-WLF-6, which prohibits tree cutting within 150 feet of known maternity roost trees. "If new maternity roost trees are found, they must be documented."[47]

[40] *See Center for Biological Diversity v. Bureau of Land Management*, 422 F.Supp.2d 1115, 1163 (N.D. Cal. 2006).
[41] *See State of Cal. v. Block*, 590 F.2d 753, 771 (9th Cir. 1982).
[42] Draft EA at 9.
[43] *Id*. at 10.
[44] *Id*.
[45] *Id*. at 9.
[46] *Id*.
[47] *Id*.

The EA fails to examine the impacts tree cutting would have on known maternity habitat, much less on maternity habitats that have not yet been identified due to a chronic lack of bat surveying on the National Forest. The number of maternity colonies that have not been documented are "numerous" according to FWS.[48] As the Biological Assessment recognizes, impacts to maternity colonies may include direct death or injury to bats resulting from the felling of roost trees or removal or alteration of other roost structures.[49] Additional impacts may include disruption of normal behavior caused by noise and behavior from people, heavy machinery, and equipment.[50] Bats may be forced to flee or even abandon roost sites due to increased activity, noise, and disturbances to maternity habitats.[51]

The spring and early summer months are particularly vulnerable times for bats. In the spring females emerge from hibernation and in the summer form maternity colonies under the exfoliating bark of dead trees or the flaking bark of live trees (e.g. shagbark hickory) where they bear and raise their pups[52]. Fecundity is low in Indiana bats with females only producing a single pup per year, typically in June and July.[53] Pups are particularly vulnerable after birth as they are unable to fly for several weeks.[54] Adults may also experience decreased fitness and extra energy expenditure from having to flee from human activity in these areas, being forced to find new roost sites, and having to avoid predators as they are being flushed from maternity sites during daylight hours.[55] Indiana bats exhibit strong site fidelity to summer roosting areas[56] and indirect impacts may include increased maternity habitat fragmentation caused by the removal of trees and roost sites. Cumulative impacts may include similar losses to maternity habitat from logging, vegetation management, and other disturbances on nearby federal, state, and private lands. None of these impacts have been assessed in the EA.

The Forest Service points to the maintenance of a 150-foot buffer to presumably mitigate these impacts, which the agency contends comes from the NLEB 4D rule. There is, however, no explanation of why this buffer is a reasonable substitute for the long-standing protections currently in place on the Daniel Boone and how this buffer will adequately protect bats from all the impacts identified above. There is also no support for the application of this buffer to Indiana bats. As an endangered species, these 4D rule allowances are inappropriate and simply do not apply to the Indiana bat.

It is also unclear what "permanent loss of habitat" means with respect to construction projects and what types of activities would be permitted without consultation in the spring and summer months. How is this determined? Without additional detail the impacts of these projects on Indiana bats and their habitats cannot be fully assessed.

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[48] Letter from Virgil Lee Andrews, Jr., Field Supervisor, U.S. Fish and Wildlife Service to Dan Olsen, Forest Supervisor, Daniel Boone National Forest, (Mar. 20, 2018).
[49] Biological Assessment at 74-78.
[50] *Id*. at 71-72.
[51] *Id*.
[52] *See* U.S. Fish & Wildlife Service, Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision, at 7 (April 2007).
[53] *See* Draft Recovery Plan at 38.
[54] *See id*. at 48.
[55] Biological Assessment at 71-77.
[56] *See* Draft Recovery Plan at 48.

The Impacts of Removing DB-WLF-12:

DB-WLF-12 states that within five miles of a significant Indiana bat hibernaculum, tree cutting is not to be conducted from September 1 through December 1.[57]

1.J-VEG-2 does not permit tree-cutting activities from September 1 through December 1 within five miles of known significant Indiana bat hibernacula.[58]

The proposed plan amendment would remove DB-WLF-12 and 1.J-Veg-2 and replace them with DB-WLF-7, which states that tree removal may not occur within ¼ mile of Hibernacula and Maternity Cave Prescription Area unless the purpose of the project is to protect or enhance microclimate of hibernacula, rare species, or rare communities.[59]

By removing the seasonal and distance restrictions on tree cutting, the proposed plan amendment may have significant impacts to Indiana bat hibernaculum. After fall migration, female prepare for mating and hibernation.[60] Bats may arrive in a hibernaculum as early as late July, peaking in September and early October.[61] Males may swarm through October to breed with late arriving females.[62] While swarming occurs throughout the night, most bats continue to roost in trees during the day.[63] Mating may occur on cave ceilings or near the cave entrance. Females store sperm throughout the winter and become pregnant through delayed fertilization soon after emergence from hibernation.[64] Hibernating bats can be adversely impacted by modifications to spring staging areas and to the microclimates of hibernacula as well as from the noise and vibration of tree cutting close to these hibernacula. The proposed plan amendment would remove current seasonal restrictions on tree cutting during hibernation as well as the distance from which these operations can occur from a hibernacula. None of these impacts have been considered by the Forest Service in the EA.

The replacement standard is also vague. As the FWS noted in its March 21, 2018 comments the ¼ mile buffer is not clearly defined. Do hibernacula include known entrance(s) and associated sinkholes, fissures, and other karst features? Will underground quarries or abandoned mine portals and their associated underground workings be included in the definition of hibernacula? Further, it is unclear which "rare species" or "rare communities" the Forest Service is referring to and whether such action justifies putting Indiana bat hibernaculum further at risk by removing trees within the ¼ mile buffer. These impacts need to be properly analyzed by the Forest Service.

The Impacts of Removing DB-Fire-8:

[57] Draft EA at 10.
[58] *Id.*
[59] *Id.*
[60] *See* Draft Recovery Plan at 40.
[61] *Id.*
[62] *Id.*
[63] *Id.* at 41.
[64] *Id.* at 40.

DB-Fire-8 states that prescribed burning is not to occur within Indiana bat roosting areas from May 1 through July 31.[65] The proposed plan amendment would remove this standard.[66] In its place would be a standard that states burn plans will include smoke management mitigation assessments to minimize smoke impacts to hibernacula and maternity caves.[67] The proposed plan would also add DB-Fire-9 providing that prescribed fire activity in suitable habitat would not occur in June or July without consultation with USFWS.[68]

The current standards protect Indiana bats from the adverse impacts of smoke and fire.[69] These impacts include fire killing roost trees and snags, causing death and injury to bats.[70] Bats that are not directly harmed will flush resulting in increased energy expenditure, decreased fitness, and increased vulnerability to predators.[71] Unoccupied roost trees could also be consumed forcing bats to find new roost trees if they are even available.[72] Heat and smoke could also enter caves, potentially harming individuals and adversely impacting hibernacula microclimates. None of these impacts are analyzed in the EA.

Summary

As FWS explains in its March 21, 2018 letter DB-WLF-8, 9, and 10 provide a "significant amount of direct protection" to Indiana bats and NLEBs during the summer roosting and fall swarming period, "while also ensuring the integrity of summer roosting habitat, swarming habitat, and hibernacula." The proposed changes may have significant adverse impacts to summer roosting and foraging, spring emergency and fall swarming, and hibernaculum. These impacts have not been analyzed in the EA as required by NEPA.

3. The Draft EA Fails to Meaningfully Evaluate the Direct, Indirect, and Cumulative Impacts to the NLEB.

The EA is further deficient in its assessment of the impacts of the proposed plan amendment on the NLEB. The direct and indirect impacts to the NLEB are similar to the impacts on Indiana bats including tree cutting in known (and yet to be surveyed) maternity habitats, decreased fitness and extra energy expenditure resulting from disturbances in these areas, and increased maternity habitat fragmentation caused by the removal of trees and roost sites. Prescribed fire may kill roost trees and snags, causing death and injury to bats. Bats that are not directly harmed will flush resulting in increased energy expenditure, decreased fitness, and increased vulnerability to predators. Unoccupied roost trees could also be consumed forcing bats to find new roost trees if they are even available. Heat and smoke could also enter caves, potentially harming individuals and adversely impacting hibernacula microclimates. None of these impacts are analyzed in the EA. Cumulative impacts may include similar losses to maternity habitat from

[65] Draft EA at 12.
[66] *Id.*
[67] *Id.*
[68] *Id.*
[69] *See* Letter from Virgil Lee Andrews, Jr., Field Supervisor, U.S. Fish and Wildlife Service to Dan Olsen, Forest Supervisor, Daniel Boone National Forest, (Mar. 20, 2018).
[70] Biological Assessment at 83-85.
[71] *Id.*
[72] *Id.* at 79-82.

logging, vegetation management, and other disturbances on nearby federal, state, and private lands. None of these impacts have been assessed in the EA.

The Forest Service attempts to avoid any discussion of the impacts to the NLEB by citing to the 4D rule which excepts certain activities from the take prohibitions under Section 9 of the ESA. NEPA, however, requires an analysis of all the direct, indirect, and cumulative impacts to endangered and threatened species, regardless of whether a 4D rule is in place for the species. Moreover, even when the FWS determines that a federal action will not jeopardize the continued existence of a listed species, significant adverse impacts to that species may still occur, triggering the need to prepare an Environmental Impact Statement under NEPA.[73]

In addition, there are impacts from the proposed plan amendment that are not permitted by the 4D rule. Within the white nose zone, the 4D rule prohibits the incidental take of NLEBs in their hibernacula, which may be caused by activities that disturb or disrupt hibernating bats and/or alter the hibernaculum's entrance or environment when bats are not present. All of Kentucky is within the zone.[74] As explained earlier with respect to the impacts on Indiana bats, by removing DB-WLF-12 and 1.J-Veg-2, hibernating bats may be adversely impacted by modifications to the spring staging areas and microclimates of hibernacula as well as from the noise and vibration of tree cutting in close proximity to these hibernacula. The proposed plan amendment would remove current seasonal restrictions on tree cutting during hibernation as well as the distance from which these operations can occur from a NLEB hibernacula. None of these impacts have been considered by the Forest Service in the EA. DB-WLF-7 also allows tree removal within ¼ mile of Hibernacula and Maternity Cave Prescription Area if the purpose of the project is to protect or enhance microclimate of hibernacula, rare species, or rare communities. As discussed earlier, this standard is vague and could permit tree cutting in certain instances within ¼ mile of known NLEB hibernacula, which is also not permitted under the 4D rule. Changes to prescribed fire standards could also result in fire and smoke adversely impacting hibernacula. These impacts need to be discussed in the EA.

4. <u>The Draft EA Fails to Meaningfully Evaluate the Direct, Indirect, and Cumulative Impacts to the Virginia big-eared bat and Gray bat</u>.

The proposed forest plan amendment may have significant impacts to the hibernacula of the Virginia-big eared bat and gray bat as well as to the summer roosting habitat of gray bats in the Daniel Boone. As previously discussed, current restrictions on cutting within five miles of Indiana bat hibernaculum (which Virginia-big eared and gray bats could share) will be removed, exposing these species to the disruptive impacts of noise and vibration of human activities and modifications to microclimates. These disruptions may lead to increased energy expenditure during hibernation and decreased fitness. Summer roosting habitat for gray bats could be additionally impacted by tree cutting. Prescribed fire and associated smoke could further impact

[73] *See Greater Yellowstone Coalition v. Flowers*, 359 F.3d 1257, 1275-76 (10th Cir. 2004)(recognizing FWS conclusion that action not likely to cause jeopardy does not necessarily mean impacts are insignificant).
[74] *See* United States Fish & Wildlife Service, Northern Long-Eared Bat Final 4(d) Rule, White-Nose Syndrome Zone Around WNS/Pd Positive Counties/Districts, (Oct. 1, 2018) at https://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf

caves where hibernating and nonvolant pups are found. These impacts have not been carefully examined and discussed in the EA.

D. 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.[75] 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.[76] 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.[77] The presence of even just "one of these factors may be sufficient to require preparation of an EIS in appropriate circumstances."[78]

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 including the amount of snag and roost trees that could be impacted and the extent of bat habitat that would be burned. Further, it appears the proposed project will serve as a precedent for an increase in tree-cutting over the course of several months, 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 by this project. As such, an EIS must be prepared to comply with NEPA.

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

To fulfill the substantive purpose of the ESA, federal agencies are required to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of [the critical] habitat of such species."[79] An action will cause "jeopardy" if it "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."[80]

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[75] *See* 40 C.F.R. § 1508.27.
[76] *Id.*
[77] *Id.*
[78] *Ocean Advocates v. U.S. Army Corps of Engineers*, 402 F.3d 846, 865 (9th Cir. 2005).
[79] *Id.* § 1536(a)(2).
[80] 50 C.F.R. § 402.02.

The first step in the Section 7 process is for the agency authorizing the project to determine if the proposed action "may affect" an endangered species.[81] If the agency determines the action will not affect a listed species, and FWS concurs, no further action is required. If, on the other hand, the action agency has determined that the proposed action "may affect" a listed species or critical habitat, it may initiate "informal consultation" with FWS.[82] If during this process it is revealed that the action is "likely to adversely affect" a listed species or critical habitat, formal consultation is required.[83]

The formal consultation process requires a written statement, known as a "biological opinion," setting forth the Secretary's opinion detailing how the agency action affects the species or its critical habitat.[84] After FWS analyzes the direct, indirect and cumulative effects of the proposed action it makes a finding as to whether the action "is likely to jeopardize the continued existence of the species."[85] If it is determined that the action will jeopardize a species or adversely modify the species' critical habitat, the biological opinion must list any "reasonable and prudent alternatives" to the proposed action that would not result in jeopardy to the species.[86]

In 2004, the U.S. Fish and Wildlife Service identified several different types of impacts 4,000 acres of green tree harvests, 350 acres of salvage/sanitation harvest, and 50,000 acres of prescribed burning authorized under the forest plan would have on the Indiana bat.[87] The Biological Opinion found: "Incidental take of Indiana bats is expected to be in the form of mortality, harm, and/or harassment and is expected to occur."[88] These impacts included mortality from the felling of trees, by the effects of smoke and fire during prescribed burns, and other associated activities.[89] Harm could occur as a result of removing potential roost trees and the accidental scarring or knocking down of potential or occupied roost trees by personnel or equipment.[90] Harassment could occur in the form of smoke and heat resulting from prescribed burning and noise and other disruptions.[91] Although the Biological Opinion did not find jeopardy, it assumed the current standards in place would be implemented and protect the species.[92] Monitoring was also required as a reasonable and prudent measure and term and condition in the Biological Opinion.[93] Further, due to the lack of available information at the time, incidental take was only authorized for a period of five years and reinitiation of consultation was required afterwards.[94]

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[81] *Id*. § 402.02.
[82] *Id.* § 402.13.
[83] *Id*. § 402.12(j).
[84] 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.02.
[85] 16 U.S.C. § 1536(b).
[86] *Id*. § 1536(b)(3)(A).
[87] Letter from Virgil Lee Andrews, Jr., Field Supervisor, U.S. Fish and Wildlife Service to Robert T. Jacobs, Regional Forester, U.S. Forest Service, Southern Region, Final Biological Opinion on Implementation of the revised Land and Resource Management Plan and its effects on the Indiana Bat, Daniel Boone National Forest, Kentucky (Mar. 20, 2004).
[88] Biological Opinion at 35.
[89] *Id.*
[90] *Id.*
[91] *Id*.
[92] *Id*. at 33.
[93] *Id*. at 36-39.
[94] *Id*. at 35-36.

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 Biological Opinion must be prepared. This is particularly important in view of past consultations on the Forest Plan (and the assumptions, terms and conditions therein) and the precipitous decline in the Indiana bat population due to white nose syndrome and other factors as discussed above.

In addition, the BA for this project fails to adequately consider the project's impacts to the NLEB, Virginia big-eared bat, and gray bat. For the reasons previously discussed, the proposal is likely to adversely affect these species and in the case of the NLEB, in a manner that is not otherwise permitted under the 4D rule. Under the ESA, the threshold for triggering formal consultation is "very low" and "any possible effect…triggers formal consultation requirements."[95] The BA concedes that "[Virginia big-eared] bats may be disturbed within hibernacula, maternity caves through vibration, noise or disturbance,"[96] "habitat may be altered"[97] and "hibernating or female Virginia big-eared bats with non-volant pups may arouse in response to smoke in the cave, resulting in extra energy expenditure and lead to reduced fitness."[98] Similarly, in the case of the gray bat, the BA finds "bats may be disturbed within hibernacula, maternity caves through vibration, noise or disturbance."[99] Bats may be indirectly affected in response to noise/vibration causing arousal that results in extra energy expenditure that can lead to reduced fitness."[100] Further, "tree removal may result in the loss or alteration of forested habitat along foraging areas and the fragmentation or isolation of forested habitat used as commuting habitat."[101] "Hibernating or female gray bats with nonvolant pups may arouse in response to smoke in the cave, resulting in extra energy expenditure and lead to reduced fitness."[102] The EA does not adequately explain what specific Forest Plan provisions, policies, and mitigating circumstances (e.g. there is otherwise a "vast amount of forested habitat surrounding stands where large-scale tree removal would occur") would otherwise offset these impacts.

We urge the Forest to engage in formal consultation with the U.S. Fish & Wildlife Service regarding this project's impacts to all four listed bat species and for the Service to prepare a biological opinion on this project. Moreover, we urge the Forest Service to prepare a conservation plan under Section 7(a)(1) of the ESA as recommended by the U.S. Fish and Wildlife Service in its March 20, 2018 letter.[103]

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[95] 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).
[96] Biological Assessment at 91.
[97] *Id.* at 93.
[98] *Id*. at 94.
[99] *Id*. at 98.
[100] *Id*. at 99.
[101] *Id.* at 100.
[102] *Id*. at 101.
[103] *See* Letter from Virgil Lee Andrews, Jr., Field Supervisor, U.S. Fish and Wildlife Service to Dan Olsen, Forest Supervisor, Daniel Boone National Forest, (Mar. 20, 2018).

III. CONCLUSION

As currently formulated, the proposed forest plan amendment will have unacceptable impacts to federally listed bat species. We urge the Forest Service to abandon this proposal 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 proposed forest plan amendment. Also, please send us all future notices for this matter.

Sincerely,

Jason Totoiu
Senior Attorney
Center for Biological Diversity

Tierra Curry
Senior Scientist
Center for Biological Diversity