UNITED STATES OF AMERICA

DEPARTMENT OF AGRICULTURE

UNITED STATES FOREST SERVICE

In re Objection to the Draft Decision Notice, )

Finding of No Significant Impact, and )

Environmental Assessment for the )

Buck Project, )

Tusquitee Ranger District, )

Nantahala National Forest )

)

) Objection No. \_\_\_\_\_\_\_

)

MountainTrue, The Wilderness Society, )

Defenders of Wildlife, Sierra Club, Appalachian )

Voices )

)

Objectors )

NOTICE OF OBJECTION AND STATEMENT OF REASONS

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November 5, 2019

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Pursuant to 36 C.F.R. § 218.8(d)(3), MountainTrue is designated as the lead objector.

# NOTICE OF OBJECTION

Pursuant to 36 C.F.R. § 218, MountainTrue, The Wilderness Society, Defenders of Wildlife, Sierra Club, and Appalachian Voices (Conservation Groups) object to the Draft Decision Notice and Finding of No Significant Impact (Decision and FONSI), selecting Alternative G of the Buck Environmental Assessment (EA) in the Tusquitee Ranger District of the Nantahala National Forest (the Project). The Decision, FONSI, and underlying EA violate the National Environmental Policy Act (NEPA) and the requirements of 36 C.F.R., Chapter II, Part 220, and the National Forest Management Act (NFMA). The responsible official for this project is Andrew Gaston, Tusquitee District Ranger. The public notice was published in the Cherokee Scout on August 14, 2019. This objection is timely.

MountainTrue is a non-profit organization with the primary goals of protecting, restoring, and preserving public lands and native wildlife through education and public participation in decisions at all levels of government. The Wilderness Society is a national nonprofit organization working to protect our nation’s public lands and is heavily invested in the ongoing forest plan revision for the Nantahala and Pisgah National Forests. Defenders of Wildlife is dedicated to the protection of all native animals and plants in their natural communities. With more than 1.2 million members and activists, Defenders of Wildlife focuses on wildlife and habitat conservation and the safeguarding of biodiversity. The Sierra Club is a national nonprofit organization with 67 chapters and about 780,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth and to educating and enlisting humanity to protect and restore the quality of the natural and human environment. The Sierra Club’s concerns encompass protection of wilderness and public lands. Appalachian Voices, headquartered in Boone, North Carolina, is a regional nonprofit that advocates for protection of the land, air, water, and communities of Central and Southern Appalachia and envisions an Appalachia with healthy, intact ecosystems and generative local economies that allow communities to thrive and will sustain Appalachia’s mountains, forests and waters. The Conservation Groups actively participate in the management of the Nantahala National Forest.[[1]](#footnote-2)

The Conservation Groups are familiar with the area of the Buck project and the surrounding national forest. The Conservation Groups’ members use and appreciate these lands for their scenic beauty and for remote hiking, hunting, fishing, camping, wildlife viewing, spiritual renewal, and other recreational and educational activities. The Buck project will affect, directly and significantly, the Conservation Groups and their members, including their use of these National Forest system lands.

The Southern Environmental Law Center, legal counsel to the Conservation Groups, is a regional non-profit organization working to conserve natural resources on public lands throughout the Southern Appalachians.

For the reasons that follow, the Forest Service must withdraw the Draft Decision and Finding of No Significant Impact, and address gaps and deficiencies in its environmental analysis. The simplest, most efficient way for the Forest Service to proceed is with a scaled-down alternative that avoids wilderness inventory areas and sensitive resources, reduces road infrastructure on steep, erosive slopes, and completes all necessary watershed improvement work. This is a revised Alternative D.

# ELIGIBILITY TO OBJECT

The Wilderness Society, Defenders of Wildlife, Mountain True, Sierra Club and Appalachian Voices file this objection to the Buck Project, for which the responsible official is Tusquitee District Ranger Andrew Gaston, pursuant to 36 C.F.R. Part 218. Objectors have previously submitted timely specific written comments regarding the Buck Project during designated opportunities for public comment, which occurred at Scoping and Draft Environmental Assessment. Each of the issues discussed in this Objection was raised in Objectors’ prior comments, and Objectors hereby incorporate those comments by reference.

# STATEMENT OF REASONS

The Buck Project Decision missed an opportunity to develop a project that meets the objectives of the agency while building consensus with stakeholders across the forest at this important time when the forest plan is under revision. Unfortunately, despite superficial changes, the Draft Decision and EA select an alternative reflecting the same fundamental problems and legal errors we identified previously in comments to the agency. Since the inception of this project, we have expressed deep concerns about the intensity of logging proposed in a unique and ecologically complex part of the Nantahala National Forest. Against the backdrop of a decades-old forest plan, rooted in an analysis that has grown stale, we noted the agency had a choice: it could avoid the impacts that were either not considered in the prior forest plan or for which the analysis has become outdated, or it could do the work to consider those impacts, both direct and cumulative, at the project level. The Forest Service takes an untenable path by deciding to log across a sensitive project landscape without analyzing those impacts.

By selecting Alternative G, which is only a slight modification of its previously preferred Alternative B, the Forest Service allows intense harvesting of nearly 800 acres, authorizes 8.9 miles of road construction that will extend infrastructure into previously unroaded areas, and risks erosion and sedimentation into outstanding resource waters. The agency knows, based upon experience in the Nantahala, that intensive ground-based logging is likely to scar the landscape in areas known for their wilderness characteristics, introduce non-native invasive plants along temporary roads pushed into backcountry areas, and allow sediment to enter streams, and will convert biologically complex old forest stands supporting rare communities into even-aged young forest, which upon maturation will exhibit less compositional diversity than they now do – instead of targeting that work in stands with a site-specific need for ecological restoration. Rather than conduct an analysis that transparently discloses these risks, and evaluate alternatives to avoid and minimize them, as required by the National Environmental Policy Act, the Forest Service dismisses the risks. It also ignores overwhelming public comments opposed to the large-scale and risky version of this project.

During the notice and comment period, the Forest Service received over 670 comments. Of these, 90 percent favored much less risky Alternative D (85 percent)[[2]](#footnote-3) or no action at all (5 percent). In response to these comments, the Forest Service suggests that by selecting Alternative G, a version of its preferred alternative, it was “striking a balance” between public concerns. Although balancing is not the Forest Service’s task in evaluating alternative courses of action under NEPA, it is obvious that no balance was struck here. Had the Forest Service been striking any balance, it would have selected Alternative D (or less), avoiding areas being considered for wilderness management designation, rare communities, and some of the most concerning road impacts. The Forest Service ignored the majority of commenters.

A project of this scale should have been grounded in collaboration, transparency, and responsiveness to public concerns. Had those ingredients been present, it is likely the District could have developed a project with broad support. Courts have criticized agencies for failing to seize such opportunities. “The government, environmental groups, and timber interests have collaborated on successful forest management projects in recent years. . . . Such collaboration has the promise to result in more transparency, improved outcomes, and fewer projects stuck in time consuming litigation.” *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt*, No. 1:17-CV-00997-CL, 2019 WL 1553673, at \*7 (D. Or. Feb. 20, 2019) (finding the agency’s evaluation of alternatives deficient).[[3]](#footnote-4) The Buck decision “fell short of that collaborative spirit.” *Id.*

National Environmental Policy Act Requirements for the Buck Project

NEPA requires the Forest Service to “take a hard look at environmental consequences*.” Sierra Club v. Forest Serv*., 897 F.3d 582, 590 (4th Cir. 2018). This “hard look” insures that: (1) the agency carefully will consider the effects of its actions on the environment, and (2) the public and other agencies will be able to analyze and comment meaningfully on the proposal and its impacts. *Nat’l Audubon Soc’y v. Dep’t of the Navy*, 422 F.3d 174, 184 (4th Cir. 2005); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt*., 387 F.3d 989, 993 (9th Cir. 2004) (citations omitted). An Environmental Assessment must address “the environmental impacts of the proposed action and alternatives.” 40 C.F.R. § 1508.9(b). NEPA requires this information be available to the public “*before* decisions are made and *before* actions are taken.” 40 C.F.R. § 1500.1(b) (emphases added).

An incomplete analysis of environmental effects, or the efficacy of measures to reduce the severity of those effects, “undermine[s] the ‘action-forcing’ function of NEPA,” because “neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989) (citations omitted). A flawed analysis of the effects spills into the consideration of alternatives because, in the absence of understanding site-level impacts, the agency also cannot evaluate the comparative merits and tradeoffs of the alternatives it considers. Consideration of alternatives is the “heart” of the NEPA process because it defines the issues and provides a clear basis for choices by the decision maker and the public. 40 C.F.R. § 1502.14.

Where, as here, there are significant omissions and incomplete analyses in the environmental analysis, the agency and stakeholders are unable to evaluate the severity of the adverse effects of activities planned in the Buck Project, because they have not been analyzed and disclosed. Consequently, the agency and the public are ill-equipped to understand the extent of tradeoffs between alternatives presented and the alternative selected.

The public’s role in Forest Service decisionmaking includes providing information about on-the-ground impacts, suggesting alternatives, modifications, and mitigation measures, and providing information about social values placed on the publicly-owned resources entrusted to the agency. This role is frustrated when the Forest Service fails to provide a transparent description of its proposal’s purpose. Here, the selection of Alternative G over Alternative D cannot be justified by the need for early successional habitat generally, because there is ample habitat in the analysis area. The Forest Service’s latest post-hoc justification (golden-winged warbler habitat) is just as implausible, as explained further below. Indeed, the selection of Alternative G can only be explained by a reluctance to drop commercial harvest volume that is driven, instead, by forest-wide and regional timber quotas (apart from the forest plan). While timber production is a component of national forest management, the importance of intact, ecologically healthy forests tips sharply against the need for timber volume in the areas at controversy in this project.

For the reasons we discuss below, the Buck EA’s deficient analysis will not support the draft decision’s finding of no significant impacts for the selected alternative. The Forest Service must withdraw and reconsider its decision. As currently planned, significant additional environmental analysis would be required before the agency or public can understand the on-the-ground consequences of Alternative G.

## The EA Does Not Analyze Impacts to Wilderness Characteristics Caused by Logging Wilderness Inventory Areas

Stands 104/13, 104/18, and 104/19 are within the Boteler Peak Wilderness Inventory Area (WIA), and stands 108/20, 108/23, 109/7, 110/7, 110/22, and 114/7 are within the Chunky Gal WIA. These stands are presently being considered through a Chapter 70 process for wilderness, backcountry, and other protective management designations in the ongoing plan revision. This Decision allows logging and construction of purportedly “temporary” roads in WIAs – a decision that is unsupported by environmental analysis because the EA failed to analyze the environmental impacts of logging in these special ecological areas. The future management of these areas is subject to detailed environmental review as part of the plan revision process, and the public has been actively involved in supporting the inclusion of these wilderness extensions, particularly the Chunky Gal Extension, as part of that process. Logging now in these areas could degrade the character that has created such robust public interest in their protection, before any decision has been made during the plan revision. And any decision to do so would require consideration of cumulative impacts to the areas’ character and eligibility, consideration that is missing from the Decision.

In previous comments, the Conservation Groups encouraged the agency to select Alternative D for the Buck Project, an alternative which would have excluded all stands within WIAs and preserved the special character that make these places eligible for protective management.[[4]](#footnote-5) Instead, the agency developed a new alternative that avoided only two out of ten of the WIA candidate stands proposed for logging in the Draft EA, neither of which were removed from the project because of their wilderness eligibility. *See* EA at 34-35. We further pointed out that the impacts of vegetation management and associated road and skid trail construction to these areas’ unique characteristics and future eligibility for designation must be, and have not been, considered under NEPA.[[5]](#footnote-6) Rather than undertake that analysis, the EA glosses over these deficiencies, pointing at existing disturbance in the area as a justification for entirely failing to examine the disturbances that would be caused by the project – particularly the *cumulative* impacts to these special areas from additional disturbance. The EA’s attempts at misdirection fall far short of meeting NEPA’s legal requirements.

In response to comments, the EA doubles down on its assertions that “aspects” of silvicultural treatments and roadbuilding are “short-lived” when compared to impacts of existing infrastructure on wilderness values in these areas. EA at 245; *see also* EA at 37-38. The EA dismisses consideration of any impacts from the current project on that basis, essentially arguing that although the Buck project will have impacts, because other impacts already exist, new impacts do not even have to be considered. This is the opposite of what NEPA requires and does not respond to the issues the Conservation Groups raised in Draft EA Comments. Regardless of the presence of “currently existing permanent infrastructure,” these areas qualified for consideration and are still under consideration, with public support, for wilderness management under the new plan. And regardless of the presence of existing infrastructure, the EA must analyze the impacts of additional disturbance in these areas on the characteristics that made them eligible for inventory.

The presence of existing infrastructure that the Forest views as detracting from wilderness characteristics is instead a reason to examine cumulative effects of disturbance required under NEPA. Cumulative impact is the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. Cumulative impacts are particularly important in informing NEPA analysis, because they “can result from individually minor but collectively significant actions taking place over a period of time.” *Id.*; *see* *Neighbors of Cuddy Mountain v. Forest Serv.*, 137 F.3d 1372, 1379 (9th Cir. 1998) (without “some quantified or detailed information” considering cumulative impacts, “ neither the courts nor the public…can be assured that the Forest Service provided the hard look that…is required”). Thus even if the EA is correct in asserting that impacts of the proposed logging and roadbuilding are “short-lived” (which, given the lack of analysis or discussion in the EA of the realities or duration of these impacts to the wilderness as discussed below, is not by any means established), the *cumulative* impacts of those “individually minor” actions can still be “significant” in conjunction with the impacts of permanent infrastructure in those areas. These areas are being evaluated as wilderness candidates because, even with the presence of existing infrastructure pointed to in the EA, they demonstrate values that make them eligible for protective management under the plan revision. The purpose of a NEPA analysis is to analyze the effects, both from the project and cumulatively with other disturbances in the area, to determine the overall environmental impacts of the action. Because the wilderness characteristics in these areas were not adequately considered under the current Forest Plan, each project must now consider impacts, individually and cumulatively, to wilderness characteristics in these areas.

The EA has not analyzed the impacts of logging in the Buck project on wilderness characteristics in these WIAs, individually or cumulatively. Wilderness values from these areas include solitude, primitive or backcountry recreation, intact wildlife habitat, water quality, visual integrity and scenic values, unique and outstanding qualities, and the economic values associated with those resources. Before deciding to proceed with timber harvest within areas that possess the characteristics that qualified them for inventory, the agency must evaluate the impacts of such a decision on those characteristics. *See, e.g.*, *Lands Council v. Martin*, 529 F.3d 1219, 1230 (9th Cir. 2008) (discussing NEPA obligations that extend to the attributes of uninventoried roadless areas); *Sierra Club v. Austin*, 82 F. App’x 570, 573 (9th Cir. 2003) (Forest Service erred in failing to address effects of logging in unroaded areas on their characteristics vis-a-vis potential for future wilderness or IRA designation); *see also* *Ore. Nat. Desert Ass’n v. Bureau of Land Mgmt*., 625 F.3d 1092 (9th Cir. 2010) (concluding that BLM violated NEPA by declining to study wilderness characteristics because “[w]ilderness values are among the resources which the BLM can manage”).

The EA simply states that “treatments would not impact wilderness characteristics,” and that proposed logging does not “represent an irreversible and irretrievable commitment of resources that would preclude future potential recommendation for wilderness.” EA at 38. To the contrary, a decision to conduct harvesting operations is emphatically an irreversible and irretrievable commitment of resources, and the Forest Service’s assertion shows that it is using language it does not understand as a talisman to ward off legal challenge. *Austin*, 82 F. App’x at 573 (“[L]ogging in an unroaded area is an ‘irreversible and irretrievable’ commitment of resources that ‘could have serious environmental consequences.’” (citation omitted)). The agency’s perfunctory conclusion is not an analysis of logging impacts on wilderness characteristics; it is an assertion made without support, and without responding to our comments that pointed out the agency itself considers evidence of past human intrusion in evaluating areas that may be suitable for inclusion in the National Wilderness Preservation System. *See* Draft EA Comments at 5-6 (*e.g.*, “Considerations of naturalness include effects of recent timber harvest, wildlife openings, roads . . . and other past management. Deviations from the natural condition, in the agency’s evaluation, included evidence of past management activities, like recent even-aged harvests, . . . skid roads, logging decks, [and] cable yarder landings” (internal quotations and citations omitted)). As we commented, for these specific WIAs, in considering the “naturalness” of the Chunky Gal Extension, although the evaluation recognizes “[m]uch of the area has been managed for backcountry recreation and is untouched by recent timber or wildlife management,” it specifically names “recent timber management activities” in certain areas that “adversely affect naturalness.”[[6]](#footnote-7) In the Southern Nantahala Extension, the Forest Service found logging “in the recent past,” “remnants of old logging roads,” and maintained “wildlife fields” depart from naturalness of the area.[[7]](#footnote-8) In the Boteler Peak area, the Forest Service noted “areas to the north and east have recent timber harvests, maintained wildlife fields, [and] low maintenance level roads” that “show evidence of human modification and adversely affect naturalness.[[8]](#footnote-9)

Furthermore, recent experience with logging in the Nantahala, where ground-based logging has resulted in excessive disturbance and stacked skid trails, and “temporary” roads are being used for re-entry in later sales and serve as conduits for NNIS, indicates timber harvest is not nearly as fleeting as the EA suggests. *See infra*, Sections III.A, IV.B, V.D*.* It is not credible for the EA to suggest that additional timber harvest and signs of management that detract from “naturalness” would not factor into future potential recommendations.[[9]](#footnote-10)

Despite the Forest Service’s reticence, these kinds of impacts are nonetheless matters of significant public interest, as indicated by the fact that 90 percent of over 600 comments preferred alternatives that avoided WIAs. Because of the potential significance of disturbance activities to WIAs and because of the high level of public interest in possible wilderness candidates, an EIS is required to fully analyze the consequences of roads and logging in these areas. Attributes that qualify an area as potential wilderness “possess independent environmental significance.” *Lands Council*, 529 F.3d at 1230 (EIS that provided “a three-page analysis on ‘roadless character’” was “cursory” and therefore insufficient); *Cascadia Wildlands*, 2017 WL 1807607, at \*10 (timber sale’s effects to Wilderness, Potential Wilderness, and other undeveloped areas necessitated an EIS). In addition, the potential for designation as wilderness areas is an independent factor of significance. *Smith v. U.S. Forest Serv.*, 33 F.3d 1072, 1078–79 (9th Cir. 1994). Impacts that would make an area ineligible for inventory in the future are likely to be “significant,” requiring full consideration in an EIS. *See* 36 C.F.R. § 220.5(a)(2) (“Proposals that would substantially alter the undeveloped character of an inventoried roadless area or a potential wilderness area” will ordinarily require an EIS.).

Additionally, the agency should not take action in this project that would prejudice or limit the consideration of alternatives for these areas in the ongoing plan revision. *See* 40 C.F.R. § 1506.1. Making a decision to enter into a timber sale contract that would create signs of vegetation management and road construction within WIAs that are being simultaneously considered for more protective management in the plan revision may convey agency bias in consideration of alternatives for these areas, or represent a decision in principle about their future management because of the functional impact. *See Native Ecosystems Council v. U.S. Forest Serv. ex rel*., 866 F. Supp. 2d 1209, 1220, 1229–30; *cf. Metcalf v. Daley*, 214 F.3d 1135, 1144 (9th Cir. 2000) (agency entering contract prior to EA indicated “subtle bias” in selection of alternatives). The future direction of these areas is subject to a detailed environmental review during plan revision, with robust public involvement and science-based analysis of alternatives. Logging and associated impacts in these areas or a decision to allow these activities now could degrade values that qualified them for the inventory and protective management in the first place.

## The EA Fails to Identify Boundaries of Timber Harvest and Assess Method of Logging on Steep Slopes Soil and Water Resources

The EA persists in an error we identified in comments by omitting information about logging unit boundaries that is essential to determining the effects of the project.[[10]](#footnote-11) Instead of identifying *where* logging is planned within several stands, consistent with its practice in other recent projects, the EA identifies the stands, and the maximum number of acres to be logged within each stand, but not the location or the method of logging within each stand. The response to comments confirms this choice is deliberate, but does not offer any reasoning that could remedy the analysis gap. *See* EA at 247. Rather than identifying stand boundaries and logging methods to be used, the EA restates only that “silvicultural treatments would be…implemented by commercial timber harvest, using ground-based skidding equipment or cable yarding systems, consistent with direction in the LRMP.” *Id.*

Because the Forest Service has not disclosed, or apparently analyzed, where it will log within certain stands, it also does not disclose the logging method that will be used in each stand. And the public cannot deduce the agency’s intentions; without necessary information identifying the acres slated for logging, stakeholders cannot determine the appropriate logging method based on slope in a given stand. Minimum compliance with plan standards hinges on the sustained slope in the to-be-determined location of the logging. The current Forest Plan requires “cable yarding that suspends at least one end of the log on sustained slopes over 40% unless site-specific analysis determines that other logging methods meet soil and water protection standards.” Forest Plan at III-34. The precise acres logged within steep stands will also affect whether additional road construction is needed to access both the top and bottom of stands, as required to harvest with cable yarding.

The Forest Service knows information regarding slope is readily obtainable; we previously prepared a GIS analysis intersecting the state of North Carolina’s LiDAR slope model and provided information from that analysis to the Forest Service.[[11]](#footnote-12) Of the 30 units proposed for timber harvest, 26 of them have >10 acres that exceed 40% slope. In 12 of the units proposed for harvest, more than half of the surface area exceeds 40% slope. The EA should have addressed the increased risk of impacts from exposed soil and bank cuts on steep slopes at the upper limit of plan standards for ground-based logging. The EA and Decision assume skidding will not be allowed on sustained slopes over 35 percent (EA at 45), but do not identify the stands in which this limitation would apply.

In the absence of identifying the location, sustained sloped, and hence, method of logging, the EA also does not evaluate the effects of ground-based or cable logging in specific locations. Of course, the difference between logging some acres within a stand versus other acres within the same stand, like the difference between using ground-based and skyline methods on the same acres, has real consequences; the soil resources section acknowledges logging will occur in soils rated severe and very severe for erosion, and that ground-based logging risks more erosion caused by more ground disturbance (EA at 91) from skid roads, skid trails, and log landings.

In response to our comments, the Forest Service fails to analyze where it will require cable logging and offers the perfunctory assurance that the “Tusquitee Ranger District would follow all LRMP standards for operations.” EA at 39. Yet, outside of this EA, the Forest Service has itself identified recent sales where units that should have been cable-logged were logged using ground-based systems. This includes harvests in the Tusquitee District, and in fact includes the very timber sale that this EA holds up as assurance that implementation will be done correctly.

In 2013 BMP monitoring data, the Forest Service identified three units that should have been cable logged instead of ground-based logged, among five timber harvests it evaluated in the Nantahala. All three units were within the Tusquitee Ranger District. At Thunderstruck, which shares the Buck Creek watershed, two units (4 and 7) were logged using ground-based methods but should have been skylined. As a result, the 2013 Forestry BMP Monitoring Report (2013 Report) noted ground disturbance was greater than anticipated: “The choice to tractor log these steep units resulted in multiple stacked skid trails and excessive ground disturbance (Unit 4 – Photo 2) and a landing close to a perennial stream (Unit 7 – Photo 3).” 2013 Report at 6. The report recommended “skyline logging methods” on steep slopes, and noted stacking “excavated skid trails on the slope should be avoided unless they can be obliterated after use.” *Id.* at 14. At the Big Cove Timber Sale, also in the Tusquitee district, unit 5 “was very steep and tractor logged. … increasing the risk for mass failure.” *Id.* According to the Big Cove field monitoring form, the unit “should have been skylined,” and because of stacked skid trails was “set up for mass wasting.” Attachment 2, 2013 Field Forms.

In all three instances, these revelations indicate plan standards for ground-based logging on steep slopes were violated, impacts that were never assessed in a NEPA document. Yet, all three units received BMP implementation scores in the monitoring evaluation indicating only a *minor* departure needing no corrective action (a score of 3 of 4). At Thunderstruck, this rating was given even though field forms in fact listed corrective action, namely obliterating skid roads including a stream crossing. *See* Field Forms, Thunderstruck units 4 and 7.

In its 2018 monitoring, the Forest Service again found ground-based logging in a unit that should have been skylined on the Nantahala, this time on slopes over 50 percent. *See* Field Form, Cable Cove unit 1, 2018. Again, the field form noted a departure: “slopes are >50% and there are 3 skid roads stacked on the slope” and recommended pulling the “fill slope onto the skid road and cover[ing] with slash.” *Id.* Despite the clear problem, the unit received a perfect compliance score of “4,” indicating site layout met or exceeded plan standards. The violation is not included in the 2018 Forestry BMP Monitoring Report (2018 Report) at all, indicative of a trend, discussed below, towards downplaying problems identified and inflating compliance scores.

Critically, the Forest Service knows based on experience in the Nantahala National Forest that ground-based logging occurs in sites that should be cable-logged. And in this very EA, the Forest Service acknowledges that “skyline logging system has been found to greatly reduce soil erosion because of less ground disturbance,” EA at 90. The 2013 Report also confirms “departures” from BMPs are far more likely with ground-based logging: Of the departures noted for harvest areas, “all were associated with tractor logging units.” 2013 Report at 5.

Although the Buck EA recognizes soil erosion risk is greater with ground-based logging, and the Forest Service knows that BMP compliance is lower with ground-based logging, the EA fails to identify the method of logging for each stand or the impacts to soil resources that can result from those methods, including the increased risk of mass wasting and excessive ground disturbance, that have been identified in this district.

Furthermore, skyline logging has its own unique complications, including the need for road access above and below a unit, and the need for concave terrain. Road access locations into each stand as shown on the maps and analyzed in the EA show the continued assumption that the units will be logged with ground-based methods; this might in fact happen based on prior experience, but would violate plan standards in some areas. Cable logging would require additional access roads that have not been disclosed or analyzed. As a result, the need for additional roads too requires additional analysis, especially given the extent of steep slopes present in the project area. Some stands that are too steep for ground-based logging may also be inoperable as skyline units because of convex terrain.

Because the EA fails to distinguish between slopes and stands that would be outside the upper limit of ground-based logging, the only path forward was to conduct a worst-case scenario analysis that assumes logging could occur anywhere within the identified acres and potentially under either method of logging.[[12]](#footnote-13) The Forest Service cannot, however, assume best-case outcomes yet fail to adopt the limits or mitigation measures needed to prevent greater harm. As reflected in the very monitoring the Forest Service relies upon, the reality shows that these greater harms can and do occur regardless of plan-level requirements, and where it does, it may not be candidly disclosed in summary monitoring reports. The EA did not disclose these potential harms in its analysis, nor did it explain how such harms will be prevented in the Buck project.

The site-specific decisions in the Buck project require site-specific analysis – before the decision is made. *See, e.g., ‘Ilio’ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083 (9th Cir. 2006). This serves NEPA’s requirements to make necessary environmental information available to “public officials and citizens *before* decisions are made and *before* actions are taken.”  40 C.F.R. § 1500.1(b) (emphasis added). The decision to deliberately omit this information from the EA, in a departure from practice in other timber sales in the Nantahala Forest, and without explanation about why this readily available information was not considered and evaluated – is arbitrary and capricious.

## The EA Does Not Disclose or Analyze Risks of Soil Erosion, Sedimentation, or Impacts to ORW Streams and Aquatic Species Based Upon Site-Specific Information

We previously identified that the presence of steep slopes, erosive soils, and outstanding resource waters[[13]](#footnote-14) in areas proposed for ground-based logging are project-specific factors that should trigger taking a hard look at likely erosion risk from exposed road cuts, skid roads, bank cuts for log landings, and other soil disturbing activities.[[14]](#footnote-15)

Instead of analyzing how these site-specific factors in the Buck project area influence soil erosion and sedimentation risks, like slope, soil erosion rating, or logging in erosion-prone soils near ORWs, the EA instead assumes best management practices (BMPs) in timber sale implementation will ameliorate the risks. Therefore, while the EA recognizes the existence of risk factors like “very erosive” [[15]](#footnote-16) soils, a “high potential for soil erosion from ground-based logging areas,” and “potential for soil movement,” it assumes using timber harvest BMPs will negate any potential harm.[[16]](#footnote-17) In the agency’s view, near-perfect implementation of standard BMPs will prevent any visible sediment from reaching streams. Whether the agency logs 795 acres (Alt G) or 497 acres (Alt D), the impacts to soil water resources are, in the agency’s view, the same. EA at 91, 94.

To get to this conclusion, the EA invokes repeatedly the 2013 and 2018 Forestry BMP Monitoring Reports, themselves based on a select subset of timber harvests from across North Carolina. The conclusions of the monitoring reports are derived from field inspections, as reported on evaluation forms that were apparently first developed in 2009 by National Forests in North Carolina. These forms score 44 BMPs[[17]](#footnote-18) in harvest units across three categories: implementation, effectiveness, and a category called “no visible sediment.” Not all harvest units are inspected, and the ones that are inspected are generally examined well after the units are closed (often greater than six months later, even though the field forms themselves indicate that inspections should take place within about a month of closure).

The last column, assessing compliance with the “no visible sediment” forest plan standard, is where the Forest Service scores itself for effectiveness at preventing sediment from reaching streams. Each separate, individual BMP the Forest Service views as functioning gets a high score indicating success; as a result, even when sediment enters a creek in the assessed unit because of a critical failure of a single BMP, the unit receives high compliance marks for “effectiveness” at preventing sedimentation – even though it did not prevent sedimentation and violated a plan standard. Tallying this column is how the Nantahala National Forest finds its way to the EA’s wildly optimistic assertion that “the overall effectiveness of BMPs in preventing sedimentation of streams from timber sales was 97.2%.” EA at 51, 94, 98, 133.

Examining the reports, it becomes evident that the scoring approach used generates a “preventing sedimentation” score disconnected from reality. The field forms actually indicate that sediment is entering streams even where the Forest Service is givingscores forimplementation of BMPs that suggest “no visible sediment” is reaching streams.

The Ten-Year Summary Report of Best Management Practices Monitoring (Ten-Year Summary) illustrates this point clearly. From 2009 to 2018 the Forest Service reviewed 63 timber sales.[[18]](#footnote-19) Seventy times across these sixty-three sales, sediment reached a stream. Ten-Year Summary at 4. In other words, on average, streams were impacted with sediment more than one time per sale evaluated, *see id.*, in sharp contrast to Buck’s assumption that “sediment or other pollutants are generally not reaching streams.” EA at 92. Based on this number alone, the Forest Service must assume that a stream will be impacted with sediment in any timber sale.

The Ten-Year Summary downplays this by pointing out that most of these violations occurred in a category called “non-critical” visible sediment. *Id.*  This category appears to be made up, because of course, there is no exception in the forest plan or the binding Forest Practices Guidelines Related to Water Quality based on how “critical” a sedimentation event is. Instead the Plan (like state and federal law) forbids the delivery of “visible sediment” to streams. The Forest Plan directs the Forest Service to “[p]revent visible sediment from reaching perennial and intermittent stream channels and perennial water bodies in accordance with NC Forest Practice Guidelines Related to Water Quality.” Forest Plan at III-40. Forest Practices Guidelines Related to Water Quality are a set of mandatory performance standards for forest harvesting practices intended to protect aquatic resources. The Forest Plan repeats the requirement to “prevent visible sediment” under forest direction aimed at protecting water quality and minimizing soil damage. Forest Plan at III-41, III-42. Based on the Ten-Year Summary, the EA’s current analysis cannot justify the conclusion that this standard will be met. Indeed, the Forest Service’s own underlying data proves the opposite.

Because the agency continues to misconstrue these monitoring results and use them as a basis to ignore a forthright analysis of the effects of logging in steep erosive soils near pristine mountain streams – in the Buck project and other recent projects – we analyze them in detail below.[[19]](#footnote-20) A review of the field forms on which the Forest Service relies, and other site-specific data not reported in the forms, demonstrates that: (1) problems like visible sediment entering a stream, obstruction of aquatic passage, and ground-based logging on sites that should be skylined (see above) are among *likely* outcomes of the Buck project; (2) the reports are under-inclusive and not sufficiently comprehensive for purposes of evaluating the short- and long-term effects of logging in the Southern Appalachians; and (3) experience implementing sales in steep, backcountry terrain reveals significant risks.

### Reliance on Best-Case Assumptions to Avoid Analyzing the Full Extent of Direct, Indirect, and Cumulative Impacts to Soil, Water, and Aquatic Resources in the Buck Project is Error

#### The BMP Monitoring Reports identify impacts to soils and streams in the Pisgah and Nantahala

The EA quotes the conclusions of its BMP Reports to dismiss doing an analysis of impacts to soil, water, and aquatic resources from the Buck Project. In reliance on the 2018 Report, for example, the EA asserts “the overall effectiveness of BMPs in preventing sedimentation of streams from timber sales was 97.2%.” However, an examination of the field forms from inspections used to compile the BMP reports (which were relied on by the EA) reveals impacts to soils and streams from timber harvest units in the Pisgah and Nantahala National Forests – despite the agency’s self-assessment of high BMP compliance scores.

In field monitoring forms on which the 2013 Report was based, **seven out of nine** projects reviewed on the Pisgah and Nantahala National Forests identified problems, some projects showing multiple kinds of violations. In six instances, sediment reportedly entered streams across four timber harvests (Roses Creek, Thunderstruck, Rose Timber Sale, and Mulberry Globe).[[20]](#footnote-21) In three projects, problems with aquatic passage and flow obstruction were identified (Fatback; Horseshoe had four problems, including one gross departure; and Mulberry Globe). 2013 Report at 13. And as discussed above, the plan standard for logging on steep slopes was violated three times, in the Thunderstruck and Big Cove harvests.

The Buck analysis obscures these problems at timber sales similar to Buck in terrain and soils, by relying instead on overall BMP compliance implementation percentages from the 2013 Report. The EA even goes so far as to suggest the 2013 monitoring results reflect a *positive* outcome at “*portions of the Buck Creek watershed* [that] were harvested previously” (EA at 94, 133) (emphasis added) – meaning, the Thunderstruck project. To be sure, the field forms for the Thunderstruck timber sale confirm the opposite, showing multiple violations of BMPs. Sediment entered a stream, flow was obstructed by a temporary road crossing (that had not been pulled), and a unit that should have been skylined was ground-based logged, resulting in excessive soil disturbance. *See* Attachment 2, Field Forms, Thunderstruck. Worse still, in this particular case, the operator was even allowed to correct a “major departure” at a perennial stream crossing *before* a low compliance score was re-assigned a perfect score of “4.”

Now, that altered score is being used to reassure stakeholders that the exact same kind of impacts that *did* occur in Thunderstruck and were obscured will not occur at the adjacent Buck sale. Alarmingly, under the Forest Service’s scoring approach, Thunderstruck’s unit 7 would receive a score of 95.4 percent “for overall effectiveness of BMPs in preventing sedimentation of streams” – even though the use of BMPs did not prevent sediment from reaching a stream (violating a plan standard), a temporary road crossing was not pulled (in violation of best practices and potentially a Clean Water Act Section 404 violation), and the unit was ground-based logged (in violation of yet another plan standard). There is no rational connection between the existence of these on-the-ground problems and the field form’s inflated BMP compliance score, suggesting that the scoring system itself is flawed and exaggerates successes. Reliance on those scores cannot then be used to dismiss an analysis of the very impacts that the Forest Service has documented in other nearby timber harvests. *See Sierra Club v. U.S. Dep’t of Interior*, 899 F.3d 260, 293 (4th Cir. 2018) (agency must “articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made”).



**2013 BMP Monitoring Report - Unit 7 temporary road (Thunderstuck)**

In 2018, even fewer projects in the Pisgah and Nantahala National forests were evaluated, but again, **three out of four** timber harvests showed problems. And again, not all problems are reported in the 2018 Report – which again provides inflated compliance numbers relied on the Buck EA.

Forest plan standards were violated in Cable Cove, in the Cheoah District, when ground-based logging occurred on slopes over 50 percent. Despite clear problems and need for corrective action, the unit received a perfect score of “4,” indicating site layout met or exceeded plan standards. The problem does not appear in the 2018 Report, which the Forest Service now relies upon in Buck to dismiss concerns about implementing the right method of logging on slopes. Cable Cove also identified two problems on temporary roads, one that was cracked and sliding into a ditch and another that needed a pipe pulled. Attachment 2, Cable Cove, 2018 Field Forms. These temporary roads were scored “4” (meets or exceeds) across multiple categories. In addition to these problems, three stream crossing problems were identified at Roughbear (fish passage barrier, scour) and Scott Mountain (fish passage barrier) timber harvests.

All told, field forms from years 2013 and 2018 reveal that **ten of the fourteen** timber harvests with units evaluated in the Nantahala and Pisgah national forests experienced exactly the kinds of problems that the Buck EA dismisses as implausible. The forms also reveal that the scoring system used is not rationally connected to predicting future problems.

#### The BMP Reports omit projects in the Nantahala and Pisgah and rely on BMP performance in other forests for projects in dissimilar forests and terrain

The implementation rates derived from the Forest Service’s flawed scoring system are not based upon comprehensive monitoring from all timber sales in the Pisgah or Nantahala National Forests, but rather, some limited subset of sales “selected” for review, by the agency itself, from across North Carolina – including coastal and piedmont forests. The 2018 Report, for example, includes many sales from forests with site conditions that are not relevant to analyzing Buck, like the Croatan National Forest and the Uwharrie National Forest that both have terrain where, generally, BMP implementation is less challenging. For those timber harvests that are included from the Pisgah and Nantahala, it is unclear on what basis the Forest Service selected some for inclusion, and excluded others. The 2018 Report, for example, *includes* the Scott Mountain and Mince Cove Timber sales on the Pisgah National Forest, but *excludes* the Panther Branch sale, which would have been recently closed, and where BMPs were not effective at controlling sediment, as discussed below.

#### A single, post-sale field visit cannot substitute for analysis of acute, long-term, and cumulative impacts

The 2018 and 2013 Reports relay the findings of one-time inspections at 54 units across 19 projects. The vast majority of these, 48 of 54, involved units that were closed, after post-harvest BMPs were in place and acute impacts of sedimentation events may have dissipated downstream and outside the unit being inspected. Many general BMP measures are not implemented until after the sale closes. For example, guidelines for the Buck project indicate that drainage structures to prevent temporary roads from being conduits for runoff are installed when logging is complete, stormproofing occurs once temporary roads are not in use, exposed surfaces are “seeded and fertilized” after harvest activities are complete, and waterbars are added to skid trails when the “project” is complete. EA at 45. In fact, the water resources section of the EA makes clear the assumption that BMPs will prevent visible sediment from entering streams is made in reliance on post-sale measures. EA at 94. The soil erosion section acknowledges the risk when “bare soil is exposed,” but again uses BMP implementation measures that will be implemented after the sale is closed to downplay a risk that manifests *during* the sale. EA at 90 (relying on seeding, waterbars, slash on skid roads to dismiss impacts). The analysis of “no effects” to aquatic resources repeats the same assumption. *See* EA at 51.

The practical reality is that exposed soil surfaces could be subjected to intense storm events once the operation gets going – as happened at Panther Branch (discussed below) – and before post-sale BMPs are in place. This is because, despite general cautionary language to restrict operations to periods of dry conditions, logging operators obviously do not control the weather. *See* EA at 94 (assuming “actions are unlikely to increase measurable sedimentation because the work would be done during dry periods”). This problem is exacerbated by the failure to place any limitation on the length that a unit may be “open” during implementation.

Despite the fact that the monitoring reports are overwhelmingly based on one-time inspections after a sale has closed, the Buck EA relies on this post-sale data to conclude that sediment effects are “immeasurable” throughout timber harvest operations. EA at 95. The agency’s failure to measure effects does not mean that such effects are immeasurable; it means that the agency lacks the data that it needs to support its claims. It is clear that by inspecting mostly closed sales, the monitoring reports do not evaluate measurable sediment *during* harvest operations, and therefore cannot support the Buck EA’s extrapolation.

Further, because many of the units were inspected more than six months after closure, it is unclear how certain time-sensitive BMPs were timely evaluated, like whether skid trails, log decks, and temporary roads were rehabilitated to stable “within” 30 days (form entries #10, 11, 32). Yet many units that were closed for over six months at inspection received “meets or exceeds” scores for BMPs required to be achieved within 30 days. *See, e.g.,* Field Forms, Att. 2, for Thunderstruck unit 4; Big Cove unit 5; Fatback units 7, 8, 12; Horseshoe unit 7, 9, 11; Rose, unit 11,2 (noting mass wasting risk despite high score for skid road stability).

The BMP monitoring reports do not attempt to evaluate longer term effects: the evaluations are single visits to recently closed sales for the most part, and occur within a year of implementation. Reliance on them to dismiss cumulative impacts over the longer term is unsupportable. Moreover, the reports do not even attempt to track the biological or ecological effects of violations against a baseline over time, either individually or cumulatively, and they are therefore ill suited to support a conclusion that there will be no such effects in future projects.

In addition to its BMP reports, which are inadequate to predict future compliance, the Forest Service has other experience to inform its understanding of effects in the EA. Unfortunately, the Buck project ignores this experience.

### The Forest Service Ignores Recent Implementation Problems at Other Projects on the Pisgah and Nantahala National Forests

#### Courthouse Creek Timber Sale

We have previously pointed out that ordinary design criteria and BMPs are unlikely to be successful at keeping sediment out of streams in challenging, erosive terrain – for example, Courthouse Creek and its tributaries in the Panther Branch sale.[[21]](#footnote-22) In July 2017, with logging operations well underway, it was clear that storm events and road cuts proved too intense for the usual BMPs; sediment was not contained on-site as predicted and instead ran off into trout streams.[[22]](#footnote-23) Once the damage was done, the Forest Service observed: “After a very wet period during logging, sediment was found entering nearby streams in Unit 1 and Unit 2.” Forest Service, Panther Branch Road Decommissioning Monitoring Report, 2019.

DWR reported “~200 feet of a headwater stream/seep was impacted with sediment measured to be 2-3 inches in depth.” *See* DWR Inspection Report (July 27, 2017).[[23]](#footnote-24) The Panther Branch sale confirms that temporary roads, skid roads, and skid trails can, with ordinary BMPs, prove to be persistent sources of sediment runoff in areas with highly erosive soils and high rainfall. Other sales throughout Region 8 have experienced similar problems (*see* Hogback in Cherokee National Forest[[24]](#footnote-25)). In an area like Buck Creek, where haul lengths are long, the unit may remain open even longer than in a more readily accessible area like Courthouse Creek, increasing the risk that heavy rains will occur while the sale is open.



**Logging unit (Panther Branch Sale, July 2017)**



**Sediment runoff into Courthouse Creek (from Panther Branch Sale, July 2017)**

#### Upper Santeetlah Timber Sale

On a field visit, Josh Kelly at MountainTrue recently observed problems with implementation at the Upper Santeetlah timber harvest, including sediment reaching a stream in stand 43-25. At the top of a skid road, the road intersects an ephemeral stream and is dumping sediment into it. The ephemeral stream has no buffer along its length. The logging road runs straight up the slope and may be a vector for channelized runoff during rain events.



**Logging unit 43-25** **(Upper Santeetlah, September 2019)**

In addition, it appears logging in unit 45-29 and the group selection that surrounded it exceeded the intensity of harvest allowed by that Decision document and forest plan. As a result, likely more ground is disturbed and the risks to soil and water are greater than analyzed.

### The Decision Relies on an Incomplete Analysis of Effects, Sedimentation in Streams is a Likely Outcome, and the Project Is Not Consistent with the Forest Plan

Visible sediment reaching streams during and after timber harvest is not an aberration, but a pattern, and the Forest Service must address it when it proposes extensive logging in steep erosive soils, as it does in the Buck Project. Instead of forthrightly disclosing these potential harms based on the practical limitations of BMPs as evident through other timber harvests, the analysis in the Draft EA is built upon a series of best-case assumptions disconnected from reality. This is not the hard look demanded by NEPA. “The hallmarks of a ‘hard look’ are thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms.” *Nat’l Audubon Soc’y*, 422 F.3d at 187.

An agency may not escape the obligation to analyze site-specific environmental consequences of the action by relying on general mitigation measures, without the requisite analysis determining the efficacy of those measures at the site-level. *See Colorado Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1173 (10th Cir. 1999) (“merely list[ing] possible mitigation measures” is insufficient); *Neighbors of Cuddy Mountain*,137 F.3d at 1381 (disapproving an EIS that lacked such an assessment); *see also Ohio Valley Envtl. Coal. v. Hurst*, 604 F. Supp. 2d 860, 889 (S.D.W. Va. 2009) (a “perfunctory description” or “mere listing” of mitigation measures without supporting analysis insufficient to support a FONSI). Here the very BMPs the Forest Service intends to rely upon have proven inadequate, and even the monitoring reports with the associated field forms for BMP implementation in the Pisgah-Nantahala support the conclusion that the likely outcome of this project will be sediment delivery to a stream in violation of a plan standard, implementation of the wrong method of logging, or obstruction of aquatic passage. The Forest Service fails to analyze this eventuality in the Buck watershed and ignores the direct, indirect, and cumulative environmental consequences to soils, streams, and aquatics.

Because the BMP reports are not reliable indicators of whether sediment will enter streams or whether flow or aquatic passage will be impacted, the reports also cannot be used to realistically assume away the effects of 8.9 miles of road construction and 800 acres of timber harvest to aquatic resources, including sediment sensitive species identified in our Draft EA comments.[[25]](#footnote-26)

The Fourth Circuit Court of Appeals recently held the Forest Service’s reliance on an “overly high efficiency rate of erosion control devices” of 96 percent in the George Washington National Forest was an error in its NEPA analysis. “The problem… was assuming that these devices would function nearly perfectly to reduce erosion and sediment, despite a wealth of evidence to the contrary.” *Cowpasture River Pres. Ass’n v. Forest Serv.*, 911 F.3d 150, 177 (emphasis added). The Forest Service repeats that error here and, as a result, does not analyze the direct, indirect, and cumulative impacts of logging under various alternatives in the Buck project. An incomplete analysis of environmental effects, or the efficacy of measures to reduce the severity of those effects, “undermine[s] the ‘action-forcing’ function of NEPA,” because “neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.” *Robertson*, 490 U.S. at 352 (citations omitted).

Furthermore, the Forest Plan directs the Forest Service to “[p]revent visible sediment from reaching perennial and intermittent stream channels . . . in accordance with NC Forest Practice Guidelines Related to Water Quality.” Forest Plan at III-40. Simply asserting compliance with the Plan, without showing how the project complies, is not sufficient under the NFMA. *See Lands Council v. McNair*, 537 F.3d 981, 994 (9th Cir. 2008) (holding that the “Forest Service must support its conclusions that a project meets the requirements of the NFMA and relevant Forest Plan” with reliable studies), *overruled on other grounds by* *Winter v. Nat. Res. Def. Council*, 555 U.S. 7 (2008).

Forest management decisions must be shown to be consistent with the Forest Plan. 16 U.S.C. § 1604(i). The Forest Service has not demonstrated its chosen action will be able to meet the requirements of the Forest Plan related to water quality and sediment.

## The EA Ignores Likely Impacts from Road Infrastructure Authorized by the Decision

### The EA Declines to Analyze the Full Impacts of Road Building

The EA does not analyze the extent of impacts from the extensive road-building authorized by the project, doubling down on errors in the Draft EA’s analysis. As a consequence, the EA fails to provide a basis to meaningfully distinguish among alternatives under NEPA. The Service’s chosen Alternative G still requires 8.9 miles of roadbuilding in the project area, a marginal reduction of only 0.2 miles from its previously preferred Alternative B. This number understates the amount of road construction/reconstruction that will occur. The EA fails to disclose that roads like the existing system portion of 6232/6232A will need to be reconstructed in order to reach new roads (temporary or permanent) built to extend them. This impact was originally included in the proposal, but later dropped in order to downplay the real effects of this project, and as a result is not disclosed as required by NEPA.

The amount of roadbuilding required for this project is significant, risking major, long-term impacts on forest, soil, and water resources. The EA, as we pointed out previously, acknowledges that “long-term impacts from features such a[s]…old temporary road prisms…continue to affect soil resources in the AA” (EA at 91-92); that “[t]emporary road reconstruction, whether on new or on existing prisms, would have long-term impacts to soil productivity” (EA at 89); and that “[a]ny improvements to soil productivity that occurred since the [previously-used] road prism was abandoned…would be eliminated with the reconstruction and construction. New temporary road construction would be a long-term disturbance in the action alternatives” (EA at 89). The EA describes “segments of temporary road when they are obliterated” as short-term disturbances, but provides no indication of which proposed temporary roads would be obliterated as opposed to seeded, and fitted with drainage structures like outsloping and waterbars. EA at 88. Some of the roads proposed for the project travel through sensitive areas, like those in Compartment 113. But while the EA acknowledges all of these effects of road-building exist generally, it never undertakes the necessary NEPA process of analyzing those effects in the context of the resources effected by *this* project in *this* part of the Nantahala forest, where slopes are steep and soils are erosive.

Although unanalyzed on a site-specific basis in the EA, soil disturbance from road construction on steep slopes[[26]](#footnote-27) in the project area, including fill slopes and cut banks, poses a real threat to water quality, which cannot be waved away based on best-case assumptions. While the Decision cites Design Criteria for the project indicating roads “will follow the general contour as practical and will generally not exceed sustained grades over 10%” (Decision and FONSI at 6), because there is no stand/site-specific analysis, or even an acknowledgement of how each stand will be logged, it is unclear how and to what extent this would alleviate the problem that many of the stands into which roads will be built for the project are extremely steep and likely to cause sedimentation impacts at a minimum.

In comments, we previously pointed out that the EA relied on unrealistic assumptions about BMP effectiveness in preventing sediment from entering streams, and as a result, left possible impacts from roadbuilding unanalyzed.[[27]](#footnote-28) The EA acknowledges that “the analysis area is comprised of soil types formed on slopes predominantly over 30 percent and have been assigned a ‘severe’ hazard of soil loss from unsurfaced roads and trails” (EA at 91), and that “assessment of the existing road network reveals that erosion would likely be an issue if mitigation measures have not been implemented” (*id.*), information known because the currently existing network is *not* being maintained and causes problems.[[28]](#footnote-29) The Conservation Groups brought these issues to the Service in comments on the draft EA.[[29]](#footnote-30)

Yet the EA declined to engage the necessary analysis. The EA provides no realistic basis to simply assume that, unlike with the “existing road network” creating erosion problems where there has been failure to mitigate and maintain, the District in this project will be able to implement mitigation and ensure correct maintenance (or actual obliteration) of these new temporary roads, and that those general measures will be sufficient to arrest any future problems under the site conditions present here. In fact, it proposes multiple “Watershed Improvements” that are necessary because older roads, lacking funds for proper maintenance, are in poor condition, resulting in sedimentation impacts to waterbodies. EA at 14-16.[[30]](#footnote-31) It is disappointing that the analysis makes no effort to identify the factors that have led to problems in the existing road network in order to predict impacts from nine new miles of road, especially when that new road is specifically classified in a way that suggests no maintenance will be implemented long-term to ensure problems do not occur.

And as discussed in Section III *supra*, the EA instead assumes near-perfect implementation of BMPs can prevent impacts – a notion disproven by the Forest’s own monitoring and experience with other nearby timber harvests.[[31]](#footnote-32) The “response” the Service offers to the Conservation Groups’ detailed comments on lack of analysis of roadbuilding is not response at all, instead reciting various sections of the EA (EA at 248), sections which remain unchanged from their form in the Draft EA. The EA made no attempt to address missing analysis of impacts from roadbuilding, and as such does not support the project’s conclusion that nearly nine miles of road can be built through steep terrain and sensitive ecosystems and avoid impacts on the forest, soil, and water resources in the Buck Project.

In addition to these problems with the EA’s general approach, which assumes away project-level impacts in the absence of analysis by the agency, the Conservation Groups note multiple issues with specific roads proposed for the project that the agency should have considered. First, the road being built to access stand 110/22, though realigned in the project, parallels a brook trout stream. Any sedimentation from this road could have significant effects on the resident brook trout population.[[32]](#footnote-33) Second, the EA does not recognize or address the need for improvement on existing roads to even successfully build the new roads proposed by the project, even though many of these roads were originally proposed for extensive reconstruction at scoping. For example, nearly a quarter of the road being built in this project is required to access two distant stands on Kitty Ridge in Compartment 113. The existing logging road, onto which the project proposes to build additional temporary road, would require substantial ground disturbance to improve the road condition to allow stand access, which could result in impacts to the high-quality forest community in the area. Part of that road stretches through undesignated tract N-958, and the EA did not even consider whether the extent of improvement necessary on that road segment for the purpose of timber harvest in adjacent areas could require a management designation (or to explain why it does not).

The EA also fails to consider edge effects that will result from building roads through interior forest to reach distant, forest-interior stands, supporting rare communities. For example, the new temporary road required to reach 113/1 is also of outsized concern because the last half mile of road extends across the south face of Kitty Ridge, an area that is steep, rocky, and covered with mature oak forest. Blue Ridge bindweed, a Watch List species, is present near the new road and has not been addressed in the Decision. Finally, the road proposed to access stand 114/7 follows an existing roadbed and fords Loggy Branch, where it appears steep for a standard crossing or ford. Additionally, this area is infested with invasive Japanese meadowsweet, and use of this access route to enter the stand would likely spread the species into areas presently insulated from the infestation. *See* Section V.D.

### The EA Classifies All Project Roads as “Temporary” To Avoid Impact and Travel Analysis

Temporary roads are not intended to be part of the forest transportation system and should not be necessary for long-term management. The Conservation Groups submitted detailed comments protesting the extensive building of supposedly temporary roads for this project,[[33]](#footnote-34) to which the EA provides no real response. *See* EA at 40. Instead, the project continues to err by proposing to build 8.9 miles of “temporary” road—some of which re-use old “temporary” roads—with the apparent intent to reuse those temporary road segments in future logging projects. The Decision goes so far as to develop a new phraseology for describing temporary roads—“existing temporary road” and “new temporary road.” EA at 1; Decision and FONSI at 3. But the EA never addresses the cognitive dissonance, nor the planning implications, of the fact that a “temporary road” that was built in a previous logging project and still exists on the forest is functionally *not* temporary. Temporary roads are not intended to be held “in storage between intermittent uses;” that definition is reserved for permanent, maintenance level 1 roads. FSH 7709, Sec. 62.32. The Buck Project is functionally building roads to be held in storage for intermittent use in future timber sales, while calling those roads temporary to avoid required transportation analysis or maintenance obligations.

There are multiple examples of this kind of “temporary” road reuse on the project. The Conservation Groups’ Draft EA Comments discuss 6232A,[[34]](#footnote-35) a temporary road in Compartment 113, first constructed and utilized to harvest stand 113/28 in 1992, utilized again 17 years later to harvest stand 113/33 in 2009, and on tap for reuse in the current project, with the addition of 1.3 miles of *new* temporary road. It is almost certain that this “existing” temporary road, as well as the “new” temporary road, would be used once again in the future to access timber harvest. Road 71A in Compartment 109 was a “temporary” extension constructed in 1994 to harvest stand 109/30 as part of the Black Branch Timber Sale; the same road, with a 0.57-mile extension, is being used to harvest stand 109/35 here. Stand 111/40 was thinned circa 2003-2004 in the Riley Cover Timber Sale, and now the exact same 0.39-mile segment of “temporary” road is being reconstructed for regeneration harvest in the same stand 16 years later. And in stand 114/7, the same road prism was used to harvest stand 114/3 in 1978, and is now being reconstructed 40 years later for the Buck Project. The EA does not acknowledge that these reused road prisms are from “temporary” road of projects past, which alter hydrology, present long-term erosion and sedimentation risks, and have changed forest interiors; it merely refers to them as “existing temporary road prism” – a made-up category for an un-obliterated, un-maintained temporary road potentially causing legacy impacts, unaddressed in a cumulative impacts analysis on re-entry.

The 3B management designation of Compartment 106 makes the mile of temporary road being constructed there (0.45 miles of which is utilizing existing road prism) also likely to be reused in future projects. As described in Draft EA Comments,[[35]](#footnote-36) management area 3B emphasizes “[a] sustained supply of timber…achieved through regulating the growth and removal of trees through time.” Forest Plan at III-71. This management area contemplates entry multiple times for purposes of “a continuous supply of sawtimber and other wood products.” *Id.* This management prescription indicates that this area will be re-entered in the future for additional harvest and projects, suggesting this “temporary” road will be re-used in the future, especially because the Forest Plan recommends precommercial thinning after harvest before age 20 and again between ages 40-60 so that the stand is in the best condition for harvest.

The EA acknowledges that non-obliterated road has greater impacts on soil resources than obliterated road. EA at 88 (characterizing temporary access roads when they *are* obliterated as a short-term impact). The EA makes it clear that the Forest Service does not intend to obliterate roads in this project. EA at 45 (“Once the temporary roads are no longer needed, they will be closed…. The closures may include treatments including, but not limited to, installation of an earthen barrier, re-contouring, placement of logging debris along the road surface, or placement of boulders.”). The EA specifically contemplates reusing *these* roads from *this* project in the future. EA at 88 (“[T]hese locations could be reused in the event that silvicultural treatments are proposed in the future.”). In fact, the EA goes so far as to imply that it is somehow *beneficial* to the forest to leave completely unmaintained roads in an in-between state, not obliterated but not “in storage,” because when these areas are re-accessed in the future, there will be less disturbance from using the old “temporary” road prisms. *See* EA at 88 (“Reusing temporary road prisms reduces the amount of soil disturbance over time.”).

The project here wants to have it both ways: without the necessary funding to manage 8.9 new miles of system road, it attempts to paper over the shortfall by calling roads intended for uses in future projects “temporary.” This shows a serious lack of accountability to the public and will almost certainly lead to impacts to soil and water, as well as vectors for unauthorized OHV use, as may currently be occurring on “existing” temporary roads in unit 108/23, and spread of non-native invasive plants.

## The EA’s Analysis of Impacts to Rare Communities and Species is Incomplete

Although two stands having rare communities and supporting ecosystem integrity and biodiversity in their current state were removed from the project,[[36]](#footnote-37) most stands with rare and unique communities that will be replaced by early successional habitat in this project remain in Alternative G. The environmental consequences of logging them have not been analyzed as required under NEPA.

For many stands, the EA assumes stands will be laid out to buffer rare plant communities and sensitive resources. EA Table 1.6.1. Because the stand layout, much less the logging method, has yet to be disclosed in a NEPA document, it is unclear whether final stand layout will in fact avoid direct impacts, and the public has not had a chance to evaluate such an approach or its effectiveness. *See Robertson*, 490 U.S. at 352 (NEPA requires “mitigation be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated”). Furthermore even though the EA forecasts this approach in some stands, it does not apply this approach uniformly. Finally, the EA ignores indirect effects of fragmenting rare communities and logging beside fragile areas like seeps and boulderfields, which may be particularly susceptible to changes in hydrology and increased sedimentation risks from removing forest cover and constructing temporary roads, skid roads, and log landings.

### The EA Does Not Analyze Direct Impacts to Rare Communities in Stands 113/1 and 109/7

The EA ignores direct impacts to special areas in which the project still plans logging. For example, no adjustments appear to be proposed for stand 113/1, though several notable natural community features are present in this stand. The upper slopes of the unit support very mature, steep rocky forest including trees >3 feet in diameter. The lower portion of the stand contains a rocky seepage and a large area of rock outcrops.[[37]](#footnote-38) Similarly, stand 109/7 contains a complex series of seeps occupying a significant portion of the stand. Though the EA did address rare plants found in this stand, the EA does not account for the extensive area of sensitive habitat. Even simply buffering the seeps by 50 feet, the method chosen by the EA to avoid direct impacts to other rare forest resources in the project, would exclude a significant portion of the stand north of the proposed temporary road. Stand 109/7 also contains forest with old growth characteristics, such as large hollow trees over 4 feet in diameter and many other hardwood trees >28 inches in diameter. Brown creeper, a species that prefers mature and old growth forest conditions, were heard singing in and around the stand.[[38]](#footnote-39)

Additionally, the project still proposes to log near a sensitive wetland in stand 107/19. In comments on the Draft EA we pointed out that this stand is adjacent to an important and diverse wetland community that historically supported the federally listed bog turtle and is home to rare plants and invertebrates.[[39]](#footnote-40) Rather than analyze impacts of logging in and around the biodiverse wetland, the EA states that stand boundaries were “realigned and moved…to create a larger buffer zone between the wetland and management activities.” EA at 35. As with the stand boundary alignment to avoid old growth, this realignment is not apparent on tile maps or shapefiles provided to the Conservation Groups. The public and the Conservation Groups are therefore unable to comment on whether the larger buffer is sufficient to avoid impacts to the wetland, especially given that this stand also contains very steep slopes, including some areas over 70%, and it is unclear what logging method will be used and whether excessive ground disturbance will occur.

### The EA Assumes Buffering Eliminates Impacts to Old Growth and Rare Communities, and as a Consequence, Fails to Analyze Indirect Impacts

Where the project represents that it will avoid direct impacts through to-be-determined boundary adjustments, the EA relies on buffering rare forest resources, including special communities, rare botanical species occurrences, old growth, and NHNAs. But the EA ignores impacts of fragmentation and edge effects on these resources. Instead, the EA assumes that not only that it can ignore indirect impacts from logging, but that avoiding direct impacts is sufficiently protective for these rare communities. The EA provides no analysis to support those assumptions.

#### Old growth

In response to comments on the draft EA,[[40]](#footnote-41) the Decision claims to avoid cutting old growth in stands by aligning stand boundaries in 108/23, 111/34, 113/11, and 114/6 to exclude portions the agency views as old growth. First, any change in stand boundaries is not evident on tile maps or shapefiles that were provided with the Decision and EA; therefore, whether stand boundary changes will in fact avoid areas with old growth forest is not clear. Without seeing the final boundary, it remains unclear whether these areas are protected. It is particularly unclear in stands 113/11 and 111/34, where meeting the remaining proposed acreage for the project would likely impact old growth given the extent of potential old growth in those stands.

Additionally, while redrawing stand boundaries to avoid old growth means that the EA did not analyze direct impacts from logging old growth, the EA still fails to address indirect effects of logging in and near old growth: namely, impacts related to fragmentation or edge effects that will be caused by logging and by the building of temporary roads and skid trails. Old growth forest communities are sensitive to edge effects, habitat fragmentation, and gradual creep of disturbance from logged areas into the boundaries of neighboring old growth areas. Edge effects from disturbance diminish the habitat value in neighboring interior forest. Many of the species that characterize old growth do best in large, unbroken stands. In addition, the Forest Service has recognized that wildlife “[t]ravel corridors are necessary to link areas of suitable habitat for all species” and notes that “[e]xamples of travel corridors are . . . mature forest that link old-growth areas.” Supplement to LRMP FEIS at IV-20. The project focuses heavily on benefits of young forest for species, but analysis of the indirect impacts of logging in travel corridors for mature forest species is a separate obligation, and omitting it falls short of the “hard look” standard under NEPA. *Marble Mountain Audubon Soc’y v. Rice*, 914 F.2d 179, 182 (9th Cir. 1990) (finding that failure to analyze fragmentation of wildlife corridors for species preferring mature forest conditions fell short of obligation under NEPA to analyze impact of logging old growth forest). The EA did not consider fragmentation impacts on the old growth ecosystem, including impacts to plant and animal species in the project area that rely on continuous, undisturbed mature and old growth forest condition.

#### Natural Heritage Natural Areas

After consultation with the Natural Heritage Program and comments on the Draft EA,[[41]](#footnote-42) stands within some NHNAs were excluded from the Buck Project. But in stand 108/20, NCNHP redrew the boundaries of the NHNA, such that logging is not actually occurring within the now-smaller NHNA. Logging up to the boundary of an NHNA, however, has potential indirect effects. Indeed, signs of nearby human disturbance like logging have been used as reasons to redraw NHNA boundaries, shrinking NHNAs over time.[[42]](#footnote-43) Given this pattern of practice, the EA should have but did not analyze impacts to NHNAs from adjacent logging, even if logging is not occurring directly inside of NHNA boundaries. Additionally, logging near an NHNA can create the risk that, without a sufficient buffer, non-native invasive species could be introduced to the NHNA.[[43]](#footnote-44)

#### Rare Botanical Resources

As with old growth and NHNAs, the EA attempts to avoid analyzing direct or indirect impacts to rare plants in the project area, in this case by establishing buffers of varying width around some individual plant locations or localized populations. In prior comments, the Conservations Groups identified that the Draft EA provided no support for the idea that buffering around individual occurrences is actually protective of these species, which occur within a larger ecosystem context.[[44]](#footnote-45) The EA provides no meaningful response and instead dismisses all direct and *indirect* impacts in reliance on a to-be-determined buffering approach. For Forest concern plant species like Wood’s sedge and American fly-honeysuckle, the lack of support for the protective benefits of buffering undermines the EA’s conclusions that project activity would be “not likely to cause a trend to federal listing or a loss of viability” on the forest, *e.g.,* EA at 161-62 (discussing Wood’s sedge), 173 (discussing Seneca snakeroot), or have no impact to individuals, *e.g.* EA at 170-71 (discussing Large purple-fringed orchid), 166-67 (discussing American fly-honeysuckle), as claimed. For example, logging even 50 yards away from a rare plant population will likely change that plant’s exposure to light and weather conditions, and as discussed below, increases the risk of competition from invasive species. The EA ignores these realities and dodges analysis of indirect effects.

Additionally, without explanation, the EA handles some of these rare botanical species inconsistently. For example, the EA acknowledges that Wood’s sedge, a Forest concern species, is present in multiple stands in Compartment 106, including 106/2, 106/4, 106/7E, and 106/7W. However, the Design Criteria for Conservation of Botanical Resources in Section 2.4 only proposes to buffer around a single population of Wood’s sedge in 106/4, without addressing buffering in other stands in which Wood’s sedge is found.[[45]](#footnote-46) Seneca snakeroot, one of the rarer species in the project area, will be buffered in stand 114/6, but it additionally occurs along the roadside through which traffic will pass to access multiple stands, such that reconstruction of roads to reach Sugar Cove and Kitty Ridge is likely to directly impact individuals and indirectly introduce invasive species. The EA does not address whether the promised buffers apply to those populations.

Therefore, even to the extent that the EA relies on buffering to assume that limited to no impacts will occur to individuals of certain rare species, it applies those buffers inconsistently, further calling into question the defensibility of assuming impacts are negated by buffers.

### The EA’s Assumptions that Forest Diversity Will Be the Same After Logging Is Not Supported

In comments, the Conservation Groups raised concerns regarding the impact of the Buck project on forest diversity.[[46]](#footnote-47) In response, the Forest Service provided nearly two full pages of historic records of logging camps, their sanitation issues, and the intensive logging of the Nantahala Forest during the time period of 1935 to 1936, in effort to lend support for the surprising statement that the current condition of forests demonstrates that “diversity would not be compromised by any of the action alternatives considered in the Buck Project.” EA at 248-50.

Among the many issues with the agency’s response, this completely ignores the extensive work of agency specialists and stakeholders to develop a departure analysis in the context of plan revision, in an effort to identify a framework to move the forest towards a Natural Range of Variation in service of achieving ecological integrity.[[47]](#footnote-48) According to the directives implementing the 2012 planning rule, the natural range of variation (NRV) is “a guide to understanding how to restore a resilient ecosystem with structural and functional properties that will enable it to persist into the future.” FSH 1909.12, Chapter 20, 23.11a.[[48]](#footnote-49)

Extensive and intensive logging in the Southern Appalachians historically is among well-recognized causes of the forest’s existing departed condition from the NRV. As the Forest Service’s own plan-level analysis shows, the Nantahala-Pisgah has more than a 400,000-acre departure for old growth, which is the direct result of historical logging. Many areas of the forest are dominated by uncharacteristic vegetation or exhibit lower than expected diversity, again because of historical logging. A recent departure analysis, supported by a cooperative agreement with the Forest Service and the Nature Conservancy, analyzed NRV values, ecozone maps, and current forest structure from LiDAR mapping in order to estimate the Nantahala-Pisgah National Forests’ ecological departure from its predicted historic state. Rich cove forest, as found in the Buck project area (EA at 56), was 54% departed from NRV.[[49]](#footnote-50) In other projects, the Forest Service is using departure analysis to inform design of ecological restoration projects,[[50]](#footnote-51) with stakeholder collaboration.

That the Buck Project EA apparently denies departed conditions exist on the forest and uses this to justify the project’s impacts to rare communities – that are rare precisely because of past logging practices – is completely bewildering.

To be clear, if this is the District’s position, historic records do in fact demonstrate the intensity of logging had widespread ecosystem impacts.[[51]](#footnote-52) Historic records also demonstrate that the forest did not rebound to even current conditions (which are still departed) without intervention. In fact, the Weeks Act and the very creation of the Forest Service *responded to* the widespread issues and destruction from the intensive logging of the time period:

In response to an insistent demand of far-sighted conservationists, the Weeks law, passed by Congress in 1911, launched the Federal Government upon a program of national-forest purchases in the East and South. The inclusion of the Nantahala region in such a program followed naturally. …. Nowhere was there greater or more urgent need for governmental protection of the mountain watersheds against wanton timber waste, burning, and soil erosion. The work of acquiring and consolidating the Nantahala National Forest commenced promptly after the passage of the law and appropriation of the funds has gone forward steadily. . . . As soon as these timberlands were put under administration by the Forest Service, work on these unsatisfactory conditions was begun.[[52]](#footnote-53)

Why the Forest Service provides historic records about damaging logging practices to supposedly demonstrate that management activities in the project area would not affect diversity is concerning. That southern forests have not rebounded to the level of diversity that existed prior to early 20th century logging is widely accepted and supported by scientific literature.[[53]](#footnote-54) The Forest Service lacks any real baseline data about the species diversity that was lost due to previous logging projects. The District’s choice to excerpt historical narratives as an excuse to convert what are now recovering rare communities into young even-aged forest is completely inexplicable and certainly does not supply the missing NEPA analysis.

### The EA Assumes Without Support that Non-Native Invasive Species Will Not Be Spread by the Project

Part of the EA’s assumption that diversity will be unchanged after logging rests on another unsupported assumption—that management of non-native invasive plants (NNIPs) as outlined in the project will prevent NNIPs from spreading. This assumption runs counter to the EA’s own statements and actual experience. The EA acknowledges, on the one hand, in accordance with best available science, that “[t]he areas at a higher risk for NNIP infestation include proposed silvicultural treatments, roadside thinning, wildlife opening work, prescribed burning control line construction, brush cutting, and proposed temporary road construction”—essentially all the activities that will be undertaken in the Buck project. EA at 80. It further acknowledges that non-native plants “found in or adjacent to proposed activity areas would likely increase across the project area along Forest Service roads.” *Id.* As a result, Alternative G would generate up to 2,376 acres of suitable habitat for non-natives due to thinning and shelterwood with reserves timber harvest. *Id.* at 81. The EA then discounts the possibility of the project actually causing any of these high-risk harms by assuming that it can successfully control the spread of NNIPs through implementation of treatments at sufficient scale and intervals to prevent conversion of native forests into NNIP thickets – a notion disproven by the establishment of post-logging infestations in other parts of the forest.

In comments, Conservation Groups identified that, based on previous experience,[[54]](#footnote-55) the EA needed to analyze the possibility that NNIP treatments would be ineffective or would not occur.[[55]](#footnote-56) The EA responds by pointing to sections of the EA, unchanged from the draft version, and states that, because “[t]he Buck project will be implemented over a 10 year period,” this will “allow for” multiple treatments for NNIPs. EA at 252. The EA provides no information about how this situation is different from past timber sales where NNIPs have spread nor any guarantee that NNIP treatments will actually take place. The EA only provides “recommendations” of steps that could be taken to ensure long-term treatments for NNIPs. EA at 81-82. The EA further provides no consideration of how increased light exposure for buffered rare plants, an indirect impact of logging nearby, in combination with edge effects could expose those rare plant populations to being overrun by NNIPs.

The Conservation Groups are not the only ones concerned about this possibility. A Forest Service botanist expressed concerns about this exact scenario in discussion with NC DCR about whether to extend the boundary of the Chunky Gal/Riley Knob NHNA up to a nearby road. *See* Attachment 7, Email from Gary Kauffman, FS, to Wesley Knapp, NC DCR (Jan. 14, 2018) (“One reason to extend it to the road is I would hate to see activity from the road for 100-200 feet to the natural area boundary thereby increasing the spread of non-native plants more prevalent on the road.”). And this is a real possibility on the ground in the Buck Project. For example, the road currently proposed for reconstruction to access stand 114/7 is infested with Japanese meadowsweet, which will have a direct route into the unit if this access route is chosen. The interior of compartments that must be accessed by building roads and that currently have no detectable NNIPs, like 108, 110, and 113, are put at risk by inclusion in this project. The EA does not analyze these risks, based on an assumption it can control NNIPs that is unsupported by experience on the forest. The EA does not, and cannot, support the conclusion that there is no risk of NNIP-spread in the project.

Additionally, the Forest Service has a responsibility under Executive Orders 13112 and 13751 to “refrain from authorizing, funding, or implementing actions that are likely to cause or promote the introduction, establishment, or spread of invasive species in the United States unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.” Attachment 7, Exec. Order No. 13,751, Safeguarding the Nation From the Impacts of Invasive Species, 81 Fed. Reg. 88,609 (Dec. 8, 2016). Based on the available facts, specific plans to access stand 114/7 via an infested roadway is likely to spread NNIPs into the harvest unit. Approving this project without explaining and making public why the Forest Service believes it can avoid that outcome would be unlawful under this order. As such, plans to log in this area cannot stand on that basis alone.

## The Analysis of Golden-Winged Warbler Ignores Best Available Science

Rejecting Alternative D purportedly to enable creation of more potential GWWA habitat runs contrary to applicable guidance and is neither required by the EA’s purpose and need nor supported by its deficient analysis. The EA continues to err by exaggerating the benefits of the project to golden-winged warblers (GWWA), benefits which are speculative and not grounded in best available science.[[56]](#footnote-57) Even more, it now relies on the creation of potential GWWA habitat, a newly suggested purpose and need for the project, as the *sole* stated reason to reject Alternative D. Decision and FONSI at 9. As explained below, the supposed need for GWWA habitat does not justify the selection of Alternative G over Alternative D. This rationale is so implausible that it suggests other, unstated goals are motivating the decision. We are aware that the Nantahala-Pisgah’s expected timber outputs are growing commensurately with increasing regional and national timber quotas. *See* Attachment 3. Because of these targets, we realize that the Forest is under pressure not to drop timber volume from projects, even when the stands are located in socially and ecologically sensitive contexts that would be degraded by harvest. This motivation also helps to explain the Forest Service’s unwillingness to conduct some harvest activities non-commercially in order to avoid the need for road construction, as discussed during a field visit. While we understand this motivation, it is unlawful for the Forest Service to fail to disclose it to the public. For a controversial project like this one, it is critical that the public know what is at stake on both sides of the ledger. By offering GWWA habitat as a pre-textual reason for its decision, the Forest Service fails this duty to the public and violates the law. *Dep’t of Commerce v. New York*, 139 S. Ct. 2551, 2575-76 (2019) (“The reasoned explanation requirement of administrative law, after all, is meant to ensure that agencies offer genuine justifications for important decisions, reasons that can be scrutinized by courts and the interested public.”).

The EA ignores best available science and fails to apply elements of the best management practices for GWWA habitat, much less identify habitat creation goals based on application of that guidance. To support the purported need for GWWA habitat in the exact spots the Forest Service already planned to log for ESH creation and has no plan to maintain for golden-winged, it now must address best practices and incorporate best available science into its project plan, and provide the details of a project actually designed for maximum benefit to the species, including allowing for public comment on such a plan. Instead, the EA ignores information provided to the Service during the comment period, makes no effort to avoid destroying habitat for some rare communities to create potential habitat for GWWA, and fails to do the necessary work of balancing the trade-offs of destroying habitat for some rare communities to create habitat for others (*see* Alternatives discussion, *infra* at Section VIII).

As the Conservation Groups commented previously, current research on the Southern Appalachian population of GWWA suggests that lack of habitat at wintering grounds is limiting population numbers, rather than a lack of habitat here, and as such suitable habitat that already exists on the forest is often unoccupied.[[57]](#footnote-58)

Particular to the Buck project area, the Forest Service concedes the analysis may not fully account for 0-10 year age class from natural disturbance, which is not reflected in FS Veg data. EA at 5. Because the Forest Service has not fully accounted for existing young forest in the project area, that means existing potential GWWA habitat may be underestimated as well. We pointed out at scoping that the Forest Service should re-assess need for ESH in the analysis area in light of the fall 2016 fire around Boteler Peak and the existing grasslands of the Buck Creek Serpentine Barrens, in order to reliably evaluate the age class of current habitats across the analysis area. Scoping Comments at 4. The EA sidesteps this and speculates that the fire “did not result in widespread stand-replacing intensity that produces ESH.” EA at 5. That assertion is not true. In the absence of analysis from the Forest Service, attached is a map demonstrating in fact the fire-created ESH, much of which is similar in elevation to the habitat the Forest Service proposes to create.[[58]](#footnote-59)

In addition to accounting for existing potential GWWA habitat, the EA should have addressed the best available information on the species in determining whether the project will have the benefits the EA claims.

Habitat management for GWWA is guided by the GWWA Status Review and Conservation Plan. According to the EA, compartments 104, 108, 110, 111, and 113 “range from 2,000 feet to over 4,000 feet in elevation and are approximately five miles or less from the known golden-winged warbler (GWWA) cluster in the Rainbow Springs area,” making all of these compartments suitable for management under the Conservation Plan’s guidelines. EA at 7, 192.[[59]](#footnote-60) It flags a GWWA occurrence in Compartment 106, noting that it is “at most, 0.75 miles from any of the proposed units within *this* compartment.” EA at 191-92 (emphasis added). The EA states that if “[u]nits in Compartments 104, 108, 110, 111, and 113” “are not cut, additional suitable habitat for [GWWA] would not be created.” Further, the Decision Notice specifically uses creation of GWWA habitat to justify logging stands in compartments 104, 108, 110, and 113 (all of which would not be logged under Alternative D), conflating GWWA habitat creation with the purpose and need of the project. Decision and FONSI at 9 (“I did not choose Alternative D because it did not include treatments in compartments 104, 108, 110, and 113 which would have provided habitat for golden-winged warblers consistent with recognized best management practices…and therefore it does not meet the purpose and need for the project.”).

There are multiple problems with this analysis. The North Carolina Wildlife Resources Commission (WRC) stated in comments on the Draft EA that “units in Compartment 111 (34, 32, 40, 41) are not within an optimal elevation range for GWWAs” and therefore will not meet the criteria for GWWA management areas under the Conservation Plan. WRC Comments at 3. Yet the EA still includes stands in Compartment 111, because they “are approximately five miles or less from the known golden-winged warbler cluster in the Rainbow Springs area.” EA at 192. This is not consistent with best management practices. Additionally, the WRC suggested that the Service consider “units in compartments 107 and 109[, which] are above 3000 feet and in proximity to existing GWWA records” as part of the total acres of ESH being created by this project and usable by GWWAs. WRC Comments at 3. The Service never addresses the suitability of these stands for GWWA habitat creation, despite the fact that 107 and 109 are the closest compartments to the known GWWA population at Rainbow Springs. The EA never considers whether logging planned to occur in those stands that are less ecologically-sensitive within these compartments[[60]](#footnote-61) can satisfy the EA’s unquantified GWWA habitat creation “need,” instead of other stands with more sensitive resources.

That is at least in part because the project never specifies, and does not seem to actually have, an overall plan, goal, or benchmark for GWWA habitat creation. Although it purports to use GWWA habitat as the decisive factor in making choices about the project, the EA does not provide any details indicating Buck actually *is* a project about GWWA habitat creation. The EA cannot defensibly claim Alternative D does not meet the “purpose and need” of the project because it does not create enough GWWA habitat, without even attempting to identify what the targets for GWWA habitat are.

The EA also makes no effort to address the existence of specifications regarding the composition and layout of GWWA habitat, as raised by commenters and detailed in the guidance. *See* Appalachian Region Guide at 4-5. The Conservation Groups provided information that “many of the acres in the Buck Project have evergreen shrubs like Rhododendron and mountain laurel that are incompatible with GWWA according to best management practices.” Draft EA Comments at 29. The EA did not address this fact. WRC pointed out the EA’s omission of detail in comments on the Draft EA, requesting that the Forest Service “describe how stands proposed for treatment that are < 5 mi from known GWWA occurrences and at optimal elevation will be managed post-harvest to enhance and provide quality habitat for GWWAs.” WRC Comments at 2. The EA’s half-hearted response is that it will follow the guidelines. WRC asked the Service to “clarify if and when the stands that are proposed for two-aged shelterwood with reserves will be re-entered for a secondary harvest” because the ESH created by the project “will be short-lived.” EA at 241. The EA responds that re-entry is not planned in this project and provided no further discussion of the effects of that fact on the GWWA habitat creation it claims is the purpose of the project. *Id.* If the elements of the project are purportedly driven to create GWWA habitat, it remains unclear why the Forest Service fails to apply the relevant guidance in project design. Indeed, the Forest Service’s insistence on the need for GWWA habitat in these compartments, combined with the ephemeral nature of any habitat that would be created (but not maintained), means that the Forest Service would have to enter these compartments regularly using rotational timber harvest methods—an approach that would involve the re-use of the permanent road infrastructure that the Forest Service is building under the guise of “temporary” roads.

All of this is information that the Forest Service needs to make an informed decision and the public needs in order to provide accurate comments on the project. The lacking analysis in the EA will not support the Decision’s assertion that other ecological restoration alternatives are being rejected because “additional suitable habitat for this species would not be created.” EA at 192. Any such analysis would need to address what are, at present, a series of unanswered questions and analysis gaps: How much habitat needs to be created in this project? How does the Forest Service intend to ensure that the GWWA Working Group’s guidelines are followed? Do the areas purported in the EA to provide good GWWA management sites comply with the standards for good management sites as indicted by the Conservation Plan?

Additionally, the EA fails entirely to even engage in the required consideration of the trade-offs of destroying rare communities and ecologically sensitive areas to purportedly provide GWWA habitat. The project location lies within a GWWA focal area under the GWWA Status Review and Conservation Plan. Conservation Plan at 3–9. However, the Conservation Plan specifies that “[n]ot all parts of a focal area are appropriate for habitat management.” *Id.* Specifically, the guidelines state that “[p]laces within focal areas where applying the management guidelines…should be **avoided** include…places where management and **protection of other rare or imperiled resources** are higher priority (e.g., national forest wilderness areas) or have conflicting management needs.” *Id.* (emphasis added). The guidelines for Best Management Practices for Golden-winged Warbler Habitats in the Appalachian Region similarly specify that management should “avoid places where other rare or imperiled resources are higher priority and have conflicting needs.” Attachment 9, Appalachian Region Guide at 4. As discussed throughout our objection, as well as in our previous EA comments, multiple areas slated for logging in Alternative G are in areas with unique forest resources of higher conservation priority, including areas currently being considered for their eligibility for wilderness designation under the plan revision. Those areas would have been avoided under Alternative D, although suitable potential alternative GWWA habitat (yet unexamined) would remain in stands within compartments 107 and 109. The EA makes no effort to consider, much less acknowledge, the implications of its choice to destroy *existing* rare ecosystem resources for the purpose of creating *potential* GWWA habitat.

Additionally, although the rationale for the Buck project as a whole relies on “the goals, objectives and direction of the LRMP,” the EA cannot rely on plan direction to substitute for its lack of analysis of impacts here, because the plan does not elevate a Forest concern species over other rare species and ecosystems that are also supposed to be protected. To be sure, the Conservation Groups support Forest Service efforts to conserve all rare species and habitats on the forest. But where, as here, creating potential GWWA habitat comes at the cost of losing other existing sensitive and unique ecosystem resources, the decision to elevate one conservation objective over others in absence of any mandate and without any serious consideration of the trade-offs being made is an irrational choice.

Further, there is a glaring arbitrariness where species of special status under the Forest Plan are being treated in vastly different ways between different projects. For example, in the Southside project, the final decision permitted destruction of mature forest around existing Green salamander habitat and a newly discovered nesting site.[[61]](#footnote-62) Like the GWWA, Green salamander has been proposed for listing under the Endangered Species Act and received a substantial 90-day finding. Like the GWWA, Green salamander has special designation on the forest; the salamander is designated a “regionally sensitive species,” a status indicating a determination that it is more sensitive than a “Forest concern” species like GWWA. Yet the approach taken by the Nantahala National Forest to Green salamander in the Southside project is dramatically different than the Service’s approach here. Green salamander was historically located in the Southside project area and surveying found new green salamander occurrences in stands slated for logging. But the Forest Service dismissed any concerns of impacts to the species by instituting a 300-foot buffer around individual rocks known to have salamander occurrences and ignoring comments on its failure to look at best available science regarding the species’ life cycle or consider fragmentation impacts from its buffering approach.[[62]](#footnote-63) It chose to log in Green salamander habitat anyway, again to create young forest. Contrast that approach to the one being taken here, where “373 acres” of forest that would not be cut in Alternative D, including stands in WIAs and within the widely support Chunky Gal wilderness extension, purportedly must be logged because “[i]f these units are not cut, additional suitable habitat for [GWWA] would not be created.” EA at 192. The Conservation Groups reiterate support for the Forest Service’s science-based efforts to conserve and protect all rare species that rely on the forest, but it is certainly a glaring difference for the same Forest to claim it is planning a project around creating habitat for one rare species while permitting another project that would destroy habitat for a species of similar status. The only common thread in this irrational outcome is the Forest Service’s determination to log old forests with mature ecosystems harboring rare species, without regard to the ecological consequences.

The result of these errors is a project that does not look like it was actually designed to benefit GWWA; instead, it looks like a plan to cut trees, thinly veiled in an ecological excuse that the Service’s own EA does not support. The EA’s philosophy on GWWA habitat creation boils down to “if you cut it, they will come.” But this reductionist view of GWWA habitat needs runs directly counter to contemporary science and established guidance. Accurate scientific analysis and public scrutiny are essential to implementing NEPA. 40 C.F.R. § 1500.1(b).

The EA, project record, and relevant guidance simply do not support the Forest Service’s narrative that GWWA management is the primary decision factor for rejecting Alternative D and selecting Alternative G.

## The EA’s Economic Analysis Is Inaccurate and Inadequate

As part of a trend of over-stating benefits of the project in its analysis, the Forest Service continues to rely on flawed assumptions about the economic benefits to the local economy. EA at 104-105. We pointed out that, in reality, the volume of timber per acre varies dramatically between stands, and the value of the timber varies greatly depending on the species composition, quality of the timber, the difficulty of logging, the haul distance, and other factors.[[63]](#footnote-64) If the Forest Service properly accounted for these factors, units with steep slopes, more complex site layout challenges, and poor quality timber may in fact reduce the overall economic benefit of a sale. In other words, Alternative G may not in fact be more profitable timber sale than Alternative D for local logging companies. The EA’s response to comments refers back to the original analysis and makes no effort to determine the actual economic factors influencing the relative benefits of alternatives, in light of the timber present, the mechanics of harvest required, and realities of the currently depressed timber market. EA at 252.

In the absence of any attempt by the EA to move beyond base assumptions which may prove incorrect, we developed information on Unit 110/7 timber and site conditions. We learned that most hardwood in 110/7 is scarlet oak, and not of particularly good quality, and most of the value comes from “over-mature” white oak of low quality. We also learned that slopes over 40 percent in the unit will likely require cable-logging under the plan standard, but because the land form of the unit is convex, that will present challenges – and may require a major change in the harvest area, further reducing the economic value of the unit. Unit 110/22 may present similar operability challenges, due to sustained slopes and convex site features complicating cable-logging. Steep slopes throughout units in this project will likely reduce stumpage rates / acre, especially when combined with road access challenges for more remote stands and haul lengths.

Because the EA fails to assess the economics of the Buck timber sale based on current market rates, the timber actually present, and site features and access challenges, the analysis provided is at best, a guess, and at worst, inaccurate. Accurate scientific analysis and public scrutiny are essential to implementing NEPA. 40 C.F.R. § 1500.1(b). An appropriate discussion of economic factors is especially important here, where the unstated need to meet timber quotas is the only plausible explanation for the agency’s intractable pursuit of Alternative G over Alternative D, which meets all of the project’s stated purposes.

## The EA Does Not Provide a Clear Basis for Choices Between Alternatives or Evaluate an Alternative That Avoids or Minimizes Adverse Impacts

The analysis of alternatives in the EA remains crippled by the deficient analysis of the environmental effects of each alternative.[[64]](#footnote-65) To allow for an informed comparison of the tradeoffs between each of the action alternatives, the Buck EA would have to analyze the environmental effects of each alternative – which has not yet occurred – and *then* evaluate the comparative merits of each alternative, which has also not yet occurred. NEPA requires a comparison of the full measure of impacts under each alternative. *See Baltimore Gas & Elec. v. Nat. Res. Def. Council*, 462 U.S. 87, 97 (1983) (requiring consideration of “every significant aspect of the environmental impact of a proposed action”). This fosters “both informed decision-making and informed public participation.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin*., 538 F.3d 1172, 1194 (9th Cir. 2008) (citations omitted).

To meet these obligations, the Forest Service would have to fully analyze the impacts of logging in sensitive ecological areas and fully examine alternatives that would avoid impacts to these areas. In comments on the EA, we pointed out that Alternative D would avoid stands being evaluated for wilderness values in the parallel plan revision, reduce the scale of commercial logging from 845 acres—now 795 acres in Alt G—in the preferred alternative to 497 acres, and reduce the footprint of temporary road construction by 63 percent. *See* EA at 34, Table 2.3.1. Alternative D also meets stated desired conditions for ESH for relevant Management Areas (MAs) under the existing forest plan.[[65]](#footnote-66)

In response, the Forest Service did not supplement its analysis to recognize differing environmental consequences between Alternative G and D. As a result, the analysis does not provide a clear basis for choice between alternatives. Instead, it obscures the issues by downplaying the negative impacts of Alternatives B, B modified, C, and G, and the comparative advantages of Alternative D.

The EA’s comparison of alternatives quantifies the volume of treatment for each alternative. EA at 43, Table 2.3.1 (ESH Created, Temporary Road mileage, Wildlife Treatments, etc.). Missing is a similar comparison of the *environmental consequences* from implementing Alternative G as opposed to Alternative D, which avoids many sensitive resources on the landscape. Again and again, the EA masks the differences between implementing these actions. For water resources, the EA finds *all* action alternatives will cause “minor, short duration effects to water quality,” despite the widely diverging amounts of logging, roads, and potential ground disturbance (497 acres in Alternative D versus 795 acres in Alternative G) in an area with steep slopes, erosive soils, and high quality streams. *See e.g.,* EA at 97. For soil resources, the EA assumes the effects on soil erosion and productivity will be the same under the action alternatives – ignoring that Alternative D reduces road construction planned in Alternative G by 63 percent. EA at 43, 91. The comparison of alternatives also provides no discussion about environmental benefits of protecting WIA character and eligibility and avoiding forest fragmentation and edge effects near old growth.

Instead of doing the necessary analysis, the Forest Service supplies new rationales to proceed with its preferred alternative, Alternative G, and reject Alternative D. First, in response to comments on alternatives, the Forest Service now represents that it is “striking a balance between often conflicting requests made by the public.” EA at 242, 243, 244, 245. Second, the decision rejects Alternative D because it does not provide as much ESH, purportedly for golden-winged warblers that the Forest Service hopes to recruit into the stands.

Neither justification addresses the missing analysis, much less fulfills NEPA’s mandate to identify and assess “reasonable alternatives” that would “avoid or minimize adverse effects” of its proposed actions “to the fullest extent possible.” 40 C.F.R. § 1500.2(e).[[66]](#footnote-67)

First, “striking a balance” between public comments is not the Forest Service’s task in evaluating alternatives in a NEPA analysis, but even if it were, no balance was struck here. The outcome instead caters to the interests of a few. Of 672 comments received on the Buck project, 90 percent of commenters favored Alternative D (85 percent) or no action at all (5 percent). Had the Forest Service actually been intent on striking any balance, it would have selected an alternative that approximated or was smaller in scale, intensity, and impact than Alternative D. Instead, the Forest ignored the majority of commenters and public support for Alternative D.

Second, in its decision, the Forest Service now asserts that the agency rejected Alternative D because it will not create enough golden-winged warbler habitat. Decision and FONSI at 9. Missing from the EA is any defensible analysis of what would be enough golden-winged habitat, in order to support this assertion in the Decision. Indeed, the purpose and need that the Forest Service uses to reject Alternative D is a general statement about increasing resiliency of non-game wildlife including GWWA: “A key related purpose of this project is to increase the resiliency of vegetation communities and the non-game and game wildlife species, including the GWWA, that rely on them for habitat.” EA at 9 (emphasis added). No target amount of golden-winged habitat was identified as necessary for the species in the purpose and need for the project. More concerning, the treatment identified does not comport with the management guidance the Forest Service relies upon anyway, as discussed previously. Mindful that Alternative D meets the ESH targets for young forest in the forest plan, a stated purpose and need, it appears that the agency latched on to GWWA habitat creation (a species that favors young forest) in order to justify hundreds of acres *more* timber harvest in the Buck project’s older forests than would be needed to meet ESH minimums. The Forest Service explicitly trades away WIAs and older forests already providing ecological integrity to existing species, based solely on a “need” to create some unidentified measure of GWWA habitat, which it does not in fact intend to manage for golden-winged.

The Forest Service leaves itself blind to the consequences of this trade because the EA does not differentiate risks or impacts under each alternative. “By failing to have a discussion on the record about these differences, neither the agency nor the public can participate in the informed decision-making process contemplated by NEPA.” *Klamath-Siskiyou Wildlands Ctr.*,2019 WL 1553673, at \*6. In *Klamath*, the court found the agency’s stated basis to reject an alternative, “because it would not yield as much timber harvest as the preferred action,” error where the agency had not discussed the differences, including ecological consequences like fire resiliency, between the preferred alternative and an ecological forestry alternative supported by conservation groups, under a metric besides the one favored by the agency (more timber harvest). *Id.* “Feasible alternatives which meet the stated goals of the project should be considered in detail.” *Id.*

This points to another problem with the Buck EA. We also asked the Forest Service to develop an alternative focused on ecological integrity, that would better protect old growth, water resources, and rare communities, by removing from Alternative D stand 114/6 (old growth and rare communities) and 107/19 (rare plant species and adjacent to wetland with historical occurrence of bog turtles), as well as 106/2, which by itself requires significant new road construction, and by including *all* of the watershed improvement work proposed under other alternatives. The Forest Service did not examine a modified Alternative D and did not provide a reason for failing to do so. Failure to consider a “viable but unexamined alternative” is a separate error also rendering an EA inadequate. *Alaska Wilderness Recreation and Tourism Ass’n v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995) (internal quotations omitted); *accord Dubois v. U.S. Dep’t of Agric*., 102 F.3d 1273, 1289 (1st Cir. 1996).

The EA’s consideration of alternatives should have provided a clear basis for choices by the decision maker and the public, 40 C.F.R. § 1502.14, but fell short of that fundamental task. As a result it must be withdrawn and supplemented.

## The EA Does Not Support a Finding of No Significant Impact Because the Project May Have Significant Effects and is Controversial

The EA’s deficient analysis does not support the Decision’s determination that the project’s effects will be insignificant. By proceeding with Alternative G, a large-scale project in the sensitive context of this landscape, the Forest Service increases its analysis burden. The Forest Service cannot credibly find that the impact would be insignificant based on the EA, because the impact has not been forthrightly disclosed. Development of an EIS is warranted due to the substantial questions about the impacts that this project may have. 42 U.S.C. § 4332(2)(c) (all agencies shall include an EIS on proposals for “major Federal actions significantly affecting the quality of the human environment”); 40 C.F.R. § 1508.3 (“Affecting means will or *may have* an effect on.”) (emphasis added).

The Council on Environmental Quality’s NEPA regulations clarify that weighing the significance of an impact requires evaluation of both context and intensity. 40 C.F.R. § 1508.27. Several intensity factors are relevant to this project:

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) 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.

…

(8) The degree to which the action may cause the loss or destruction of significant scientific, cultural, or historical resources.

…

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

For example, a pattern of sediment entering streams and ground-based logging on steep slopes in violation of plan standards in the Nantahala forest demonstrates the project threatens a violation of federal law. The potential unexamined impacts to outstanding resource waters supporting native aquatic species like brook trout are unique risks that the EA fails to recognize. *See* 40 C.F.R. § 1508.27 (5), (10).

The precedent created by making silvicultural investments in areas appropriate for wilderness designation, underscores the significance of the environmental impacts of the project. *See* 40 C.F.R. § 1508.27 (6). Courts have found disturbance activities to WIAs may require an EIS. Attributes that qualify an area as potential wilderness “possess independent environmental significance.” *Lands Council*, 529 F.3d at 1230 (EIS that provided “a three-page analysis on ‘roadless character’” was “cursory” and therefore insufficient). In addition, the potential for designation as wilderness areas is an independent factor of significance. *Smith v. U.S. Forest Serv*., 33 F.3d 1072, 1078–79 (9th Cir. 1994). Impacts that would make an area ineligible for inventory in the future are likely to be “significant,” requiring full consideration in an EIS. *See* 36 C.F.R. § 220.5(a)(2) (“Proposals that would substantially alter the undeveloped character of an inventoried roadless area or a potential wilderness area” will ordinarily require an EIS.). Furthermore, with regard to WIAs, signaling an intent to log areas under consideration for wilderness also could be a “decision in principle” about the “future consideration” of whether these areas will be designated wilderness or otherwise protected in the plan revision. *See, e.g., Native Ecosystems Council*, 866 F. Supp. 2d at 1229–30 (adoption of a lynx habitat map into a tree thinning EA represented a decision in principle about “future use of the land” under 40 C.F.R. § 1508.27(b)(6)). This too is an independent significance factor.

Furthermore, the need to conserve rare and unique ecological communities, their scientific significance, and the capacity of those ecosystems to recover in light of multiple stressors at multiple scales (previous logging, fragmented land ownership patterns, climate change) are matters of robust scientific and public discourse. *See* 40 C.F.R. § 1508.27 (3), (4), (8). Recent analyses on the forest, for example, demonstrates rich cove forest (predominant in the Buck project area) are 54% departed from their natural range of variation in the national forest, and the primary driver was lack of old growth forest.[[67]](#footnote-68) The existing departure is indicative of the scars of past logging practices. How to restore Southern Appalachian forests in light of this well-recognized departure is a matter of significant public and scientific concern and controversy, unfolding now in the course of the presently ongoing forest plan revision.

Intersecting significance factors, we previously pointed[[68]](#footnote-69) out that the EA’s assumptions about the carbon sequestration benefits of the project are questionable and a matter of scientific controversy related to addressing climate change. *Id.* at § 1508.27(4). In response, the agency was silent. *See* EA Section 5.2 Response to Comments (providing no discussion of carbon sequestration or climate impacts). In light of the significant debate surrounding climate change response and resilience, silence in the face of scientific controversy is not a defensible option. To reiterate, best available science demonstrates that older forests are important for carbon sequestration – calling into question the EA’s assumption that logging will, in the long run, sequester more carbon, a view which invites controversy. Ending timber harvest on public lands in the U.S. would increase forest carbon sequestration by 10%.[[69]](#footnote-70) Research indicates late successional and old-growth forests in the North Eastern U.S. had much higher carbon stores than younger forests.[[70]](#footnote-71) Conversely, forests clearcut since 1950 in the Appalachians had 33% less carbon uptake annually than unharvested forests, and highgraded forests had 37% less carbon uptake annually than unharvested forests.[[71]](#footnote-72) A study of forest biomass indicates that “Eastern forests have the potential to accumulate significant quantities of additional biomass in living trees (at least an additional 20000 Tg) if left unharvested, and thus storing atmospheric C into the future. As many of the forests in the eastern U.S. are <100 year old, they would require a few hundred years more to attain the structure of old-growth forests.”[[72]](#footnote-73) The EA’s discussion reflects a lack of critical examination of the best available science when it comes to carbon sequestration and the Buck Project and, as we raised previously, casts serious doubt on the adequacy of the agency’s analysis of climate change. *See* EA at 106-109.

Resiliency to climate change is also an issue of significance and controversy in the project. Southern Appalachian forest ecosystems are rich in diversity and at risk from changes to climate.[[73]](#footnote-74) The Forest Service, in their National Roadmap for Climate Change, states that “[n]ature is enormously complex. Climate change magnifies those complexities and introduces additional uncertainties.” The agency’s roadmap represents that the Forest Service will “[address] climate change in planning and analysis” by “[i]ncorporating climate-related vulnerabilities and uncertainties into land management and project-level environmental analyses.”[[74]](#footnote-75)

In the Buck Project, the Forest Service asserts that Alternative G would enhance the forest’s response to climate change as “[t]he regeneration in the areas to be harvested would provide more structural diversity to the area and establish young, vigorous stands that may be more resilient to the changes in climate than those ages 61 and older.” EA at 107. However, this sweeping assumption is neither established nor supported. While disturbance from management can create drastic change and adaptation in a forest, that change is not necessarily desirable, as successional species can alter ecosystem function and processes as well as ability for adaptation. In comments, the Conservation Groups highlighted concern regarding impacts to ecosystems from management decisions that could affect forest structure and resilience, especially in regard to older forest stands within the Buck project area.[[75]](#footnote-76) Like concerns regarding carbon sequestration, the Forest Service responds with silence on an issue of significant scientific controversy regarding unknown potentially severe future impacts.

Scientific research demonstrates that disturbance of ecosystems through logging older stands can undermine a forest’s resilience to climate change. Biodiversity, genetic variability of species as well as “the size of forest ecosystems (generally, the larger and less fragmented the better)” has a significant impact on a forests’ resilience.[[76]](#footnote-77) A recent study found that older forests are less vulnerable to climate change than younger forests, and that resiliency increased with age.[[77]](#footnote-78) Trading stands with older forest structure, diverse species, and enhanced ecosystem function for early successional habitat has the potential to diminish the forest’s capacity and resiliency to withstand overall changes from climate. Rather than examine these impacts, this project rolls the dice on climate change, threatening to render forests in the Buck project area less resilient to climate change impacts. The substantial scientific questions surrounding this management strategy – logging old forests as a purported strategy for improving forest resiliency – warrants an EIS, with consideration of the cumulative impacts of such an approach across the Nantahala National Forest, which of course is unconsidered in the decades-old plan.

A decision not to prepare an EIS is unreasonable “[i]f substantial questions are raised regarding whether the proposed action may have a significant effect upon the human environment,” or if the agency fails to “supply a convincing statement of reasons why potential effects are insignificant.” *Save the Yaak Committee v. Block*, 840 F.2d 714 (9th Cir. 1988) (internal citations omitted). Courts have held that “an EIS *must* be prepared if substantial questions are raised as to whether a project . . . *may* cause significant degradation of some human environmental factor.” *Idaho Sporting Congress v. Thompson*, 137 F.3d 1146, 1149 (internal citation omitted). It is not necessary to show “‘that significant effects *will in fact occur*,’ raising ‘substantial questions whether a project may have a significant effect’ is sufficient.” *Id.* at 1150 (internal citation omitted).

The EA leaves “substantial questions” about the project’s effects, including to WIAs, rare communities, sedimentation, and water quality, all necessitating an EIS. *See Blue Mountains Biodiversity Project*,161 F.3dat 1213-14 (stating an EIS is required to address multiple inadequacies in an EA, including cursory and inconsistent analysis of sedimentation issues, which raised substantial questions about the project’s effects on the environment); *see also Found. for N. Am. Wild Sheep v. U.S. Dep’t of Agric.*, 681 F.2d 1172, 1178 (9th Cir. 1982) (holding that failure to address “certain crucial factors, consideration of which [is] essential to a truly informed decision whether or not to prepare an EIS,” renders an agency’s EA arbitrary in violation of NEPA).

## Conclusion

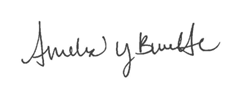
An analysis that meets the basic objective of informing the agency and the public of the environmental consequences of its Decision is not optional under NEPA. That has not yet happened for the Buck project. In the absence of such an analysis, the Forest Service also has refused a modified Alternative D that would avoid the most sensitive resources on the landscape and reduce the footprint of road infrastructure, and also reduce the scale of analysis necessary to proceed under a FONSI. A version of Alternative D was backed by broad stakeholder support and overwhelmingly favored by public comments.

If the Forest Service is determined to proceed with among the riskiest alternatives opposed by most of the public, it must meet the minimum NEPA requirement of admitting the impacts of that choice, actually disclosing site-specific actions, identifying how and where the logging will occur, disclosing direct, indirect, and cumulative impacts, and comparing alternatives as a set of tradeoffs that includes an assessment of what is lost by selecting Alternative G, not just what the Forest Service thinks it will gain. We hope this objection process allows us to work with the agency to find solutions for the Buck project that focus management activities where they will not undermine progress toward restoring ecological integrity and will protect rare communities and soil and water resources.

# REQUEST FOR RELIEF

For the reasons stated, the Forest Service’s EA, Decision Notice, and FONSI violate NEPA and the NFMA. Accordingly, the Forest Service must withdraw this project. If the Forest Service nonetheless intends to proceed with this project as presently conceived, it must prepare an EIS to satisfy its NEPA obligations.

Date: November 5, 2019 Signed for Objectors



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1. The connection between the issues raised in this objection and prior written comments is indicated by footnote throughout the discussion of each issue. [↑](#footnote-ref-2)
2. Many of these comments supported the minor modifications to Alternative D favored by the Conservation Groups. [↑](#footnote-ref-3)
3. *Report and recommendation adopted*, No. 1:17-CV-00997-CL, 2019 WL 2774317 (D. Or. July 2, 2019). [↑](#footnote-ref-4)
4. *See* Scoping Comments at 2-3; Draft EA Comments at 4-6. [↑](#footnote-ref-5)
5. *See* Draft EA Comments at 5. [↑](#footnote-ref-6)
6. *See* Attachment 1, Evaluation of Areas that may be Suitable for Inclusion in the National Wilderness Preservation System, Nantahala and Pisgah National Forests (June 2017) at 244. [↑](#footnote-ref-7)
7. *See id.* at 173. [↑](#footnote-ref-8)
8. *See id.* at 231. [↑](#footnote-ref-9)
9. *See id.* at 231, 244. [↑](#footnote-ref-10)
10. Draft EA Comments at 11-13, Scoping Comments at 4. [↑](#footnote-ref-11)
11. *See* Attachment 4 to Draft EA Comments. [↑](#footnote-ref-12)
12. *See* *WildEarth Guardians v. Conner*, 920 F.3d 1245 (10th Cir. 2019) (Forest Service could account for the uncertainty about treatment locations by evaluating the project's effects on lynx in a worst-case scenario in which all the mapped lynx habitat in the project area was treated). [↑](#footnote-ref-13)
13. Several streams in the project area, like Buck Creek and Glade Branch, are designated “outstanding resource waters” and “trout waters” and are subject to more protective standards, including a tighter turbidity standard. The Outstanding Resource Water (ORW) designation is reserved for “unique and special” waters of the state that are of “ecological significance” and “exceptional water quality.” 15A N.C. Admin. Code 02B .0225. The presence of ORW streams underscores the special characteristics existing in the Buck project area. [↑](#footnote-ref-14)
14. Draft EA Comments at 13-18, Scoping Comments at 6-7. [↑](#footnote-ref-15)
15. The EA notes soils rated “severe” and “very severe” are present in areas proposed for treatment, but does not identify specific stands, or attempt to correlate combined risk of erosive soil and steep slopes in specific stands, much less their proximity to ORW waters. [↑](#footnote-ref-16)
16. *E.g.*, EA at 91 (impacts to water resources will be “minor” and of “short duration”); EA at 84 (soil movement is expected to be short-term and limited); EA at 42 (“no effects” on aquatic resources because of “BMP effectiveness”). [↑](#footnote-ref-17)
17. The 44 mitigating measures each earn scores; measures include, for example, whether fertilizer was applied properly, whether harvest area features like skid trails and log decks were best located to protect the sight, and whether breaks in grade were used. Not all mitigating measures are scored for all units or across all 3 columns. [↑](#footnote-ref-18)
18. Conservation Groups received the 2018 ten-year summary report in response to a FOIA but not the underlying field forms; therefore, we cannot address the circumstances of each sedimentation event. We discuss below the field forms for the 2013 and 2018 Reports, which we did receive. [↑](#footnote-ref-19)
19. In response to a FOIA, we obtained the underlying field forms for monitoring reports in the 2013 and 2018 Reports. [↑](#footnote-ref-20)
20. Based on a review of the 2013 field forms, it is unclear on what basis the 2013 summary report indicates only three instances of sediment in streams. 2013 Report at 3. [↑](#footnote-ref-21)
21. *See* Draft EA Comments at 15-16. [↑](#footnote-ref-22)
22. *See* Attachment 4 to Draft EA Comments. [↑](#footnote-ref-23)
23. Attachment 5 to Draft EA Comments. [↑](#footnote-ref-24)
24. *See* Attachment 6 to Draft EA Comments. [↑](#footnote-ref-25)
25. *See* Draft EA Comments at 27-29. [↑](#footnote-ref-26)
26. *See* Attachment 4 to Draft EA Comments. [↑](#footnote-ref-27)
27. *See* Draft EA Comments at 18. [↑](#footnote-ref-28)
28. The Conservation Groups addressed one specific example of a road issue requiring repair in this project because the road has not been properly maintained, a road slide into Barnards Creek. Draft EA Comments at 19. In response, the Service stated that the issue in question “is located on a legacy road…acquired from previous owners….[T]he road was never treated for watershed stability after Forest Service acquisition.” EA at 247. That response does not address our concern. Existing Forest Service roads, including those acquired from private landowners, are not being maintained because of funding shortfalls to maintain the current road system. Timber receipts are available for only five years to address roads in a project area, but the time between entries is often much longer. The solution to this funding problem is not to build more roads that will sit, unmaintained, until any problems become severe enough to necessitate fixing. And if new roads are going to be constructed, the likelihood that they will not be maintained, as occurs frequently under the current system, must be analyzed. [↑](#footnote-ref-29)
29. *See* Draft EA Comments at 18-20. [↑](#footnote-ref-30)
30. *E.g.*, Watershed Improvements called for in the project include repairing stream crossings, re-vegetating an old road ford, obliterating “old roads” that are being used by OHVs, repairing a road slide, and stabilization of old road bed. [↑](#footnote-ref-31)
31. The EA discusses a Coweeta study in which sediment yield into streams “resulted from freshly constructed roads which received a record storm event before the roads were stabilized by grass.” EA at 247. Elsewhere, the EA concludes that it could take up to a year after management concludes for vegetation to establish on temporary roads. EA at 91. Meanwhile, this region continues to experience high or record rainfall events. The EA never considers whether the combination of these factors could result in sediment impacts in the Buck project, because it assumes its general BMPs will prevent sedimentation under any and all conditions. [↑](#footnote-ref-32)
32. The Decision and FONSI states that “[a]ll proposed temporary roads within Compartment 110 will be constructed under the direct supervision of the harvest inspector to ensure that erosion control measures are installed at the end of each work day.” Decision and FONSI at 6. But the effectiveness of this mitigation is still based on the EA’s assumption that BMP effectiveness equates to eliminating sediment problems in projects, which the monitoring data and experience in other projects demonstrates is not the case. [↑](#footnote-ref-33)
33. Draft EA Comments at 20-22. [↑](#footnote-ref-34)
34. Draft EA Comments at 20-21. [↑](#footnote-ref-35)
35. Draft EA Comments at 21. [↑](#footnote-ref-36)
36. Alternative G eliminates 104/23, which is located in a WIA and an NHNA and contains rare botanical communities, and stand 110/18, which contains old growth. [↑](#footnote-ref-37)
37. *See* Biological Survey at 63-64, Attachment 2 to Draft EA Comments, for more details on this stand. [↑](#footnote-ref-38)
38. *See* Biological Survey at 55-57, Attachment 2 to Draft EA Comments, for more details on this stand. [↑](#footnote-ref-39)
39. *See* Draft EA Comments at 26. [↑](#footnote-ref-40)
40. *See* Draft EA Comments 6-10. [↑](#footnote-ref-41)
41. *See* Draft EA Comments at 22-24; Scoping Comments at 5-6. [↑](#footnote-ref-42)
42. *See* Attachment 4, Final Environmental Assessment Southside Project (Feb. 2019) at 53-54. [↑](#footnote-ref-43)
43. *See* Section V.D. below. [↑](#footnote-ref-44)
44. *See* Draft EA Comments at 25-26. [↑](#footnote-ref-45)
45. *See* Botanical Survey at 35. [↑](#footnote-ref-46)
46. Draft EA Comments at 25. [↑](#footnote-ref-47)
47. Ecological integrity is “[t]he quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence.” 36 C.F.R. § 219.19. [↑](#footnote-ref-48)
48. “The goal of understanding natural range of variation is to help design plan components to maintain or restore the integrity of the diversity of terrestrial, riparian, and aquatic ecosystems and habitat types throughout the plan area provide an ecosystem (coarse-filter) approach to maintaining the persistence of native species.” FSH 1909.12, Chapter 20, 23.11a. [↑](#footnote-ref-49)
49. See Attachment 5, Kelly, Josh. 2013 “An Assessment of the Ecosystems of the Nantahala-Pisgah National Forest and Surrounding Lands.” [↑](#footnote-ref-50)
50. *See* Twelve-mile, for example, https://www.fs.usda.gov/nfs/11558/www/nepa/103581\_FSPLT3\_4292268.pdf. [↑](#footnote-ref-51)
51. *See* Attachment 6, United States Forest Service, Wiese, F. William. (1936). *Nantahala national forest, Georgia, North Carolina, South Carolina.* [Washington: U.S. Govt. print. off. 1936] at 4. [↑](#footnote-ref-52)
52. *See id.* at 4-6. [↑](#footnote-ref-53)
53. *See* Attachment 6, Wear, David N.; Greis, John G., eds. 2002. Southern forest resource assessment. Gen. Tech. Rep. SRS-53. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station, at 55. [↑](#footnote-ref-54)
54. The Conservation Groups provided an example of a recent harvest unit that was infested with NNIPs after commercial thinning in the early 2000s. Draft EA Comments at 30. [↑](#footnote-ref-55)
55. *See* Draft EA Comments at 30. [↑](#footnote-ref-56)
56. *See* Draft EA Comments at 29-30. [↑](#footnote-ref-57)
57. *See* Draft EA Comments at 30. [↑](#footnote-ref-58)
58. *See* Attachment 8, Buck Analysis Area, Forest Cover Loss by Year [↑](#footnote-ref-59)
59. Stands in Compartments 111 and 113, as well as stand 104/18, are greater than 5 miles from Rainbow Springs GWWA occurrence data, and stands in Compartments 108 and 110, as well as stands 104/13 and 104/19, are greater than 1 mile away. GWWA best management practices recommend that management outside of focal areas should occur less than 5 miles and preferably less than 1 mile from known GWWA populations. Attachment 9, Appalachian Region Guide at 4. [↑](#footnote-ref-60)
60. The Conservation Groups note that stand 109/7 lies within a wilderness inventory area and contains a series of seeps, and as such should be considered as ecologically sensitive and significant, *see* Sections I, V.A. Stand 107/19 also contains several rare species and is adjacent to a wetland with historic bog turtle occurrences, *see* Section V. While the project has “[r]ealigned and moved stand boundaries to create a larger buffer zone between the wetland and management activities,” EA at 35, this stand is also ecologically sensitive and significant. Even removing these two stands from the project, 5 stands in compartments 107 and 109 would be available for potential golden-winged habitat creation. [↑](#footnote-ref-61)
61. *See* Attachment 4, Final Environmental Assessment Southside Project, at 120-121. [↑](#footnote-ref-62)
62. *See* Attachment 10, Notice of Objection and Statement of Reasons, Southside Project (Aug. 27, 2018) at 20-23. [↑](#footnote-ref-63)
63. Draft EA Comments at 34. [↑](#footnote-ref-64)
64. Draft EA Comments at 34-36. [↑](#footnote-ref-65)
65. Most of the project is in MA 4D, which emphasizes management for species that depend on “older” forests and has no minimum for ESH. (As a result, even current levels of ESH already meet plan goals in MA 4D.) Only one compartment in the project is allocated to a MA with a desired condition stated in terms of a minimum ESH. Compartment 106 is within MA 3B, which is managed for “species that will benefit from a managed forest,” and includes an ESH goal of 5 percent to 15 percent. EA at 9. Alternative D provides for 193 acres of commercial timber harvest in Compartment 106, which more than meets the minimum ESH desired conditions. *See* EA, Table 1.2.1 (showing total ESH in Compartment 106 upon implementation is 202 acres, or nearly 13 percent of the compartment). Furthermore, as we pointed out at scoping, it does not appear that the EA has fully analyzed existing 0-10 age class created by natural disturbance, which the EA acknowledges. *See* EA at 5. The attached map confirms this is the case, and available ESH remains underestimated by the EA. [↑](#footnote-ref-66)
66. 40 C.F.R. § 1500.2(e): “Federal agencies *shall*, to the fullest extent possible: [u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment” (emphasis added). This requirement applies to both EAs and EISs. 42 U.S.C. § 4332(2)(E). [↑](#footnote-ref-67)
67. *See* Attachment 5, Kelly, Josh. 2013 “An Assessment of the Ecosystems of the Nantahala-Pisgah National Forest and Surrounding Lands.” [↑](#footnote-ref-68)
68. Draft EA Comments at 37-38. [↑](#footnote-ref-69)
69. Attachment 7 to Draft EA Comments, Depro, Brooks M. *et al*. 2008. Public land, timber harvests, and climate mitigation: Quantifying carbon sequestration potential on U.S. public timberlands. Forest Ecology and Management 255 (2008) 1122–1134 [↑](#footnote-ref-70)
70. Attachment 7 to Draft EA Comments, Gunn, John S. *et al*. 2014. Late-successional and old-growth forest carbon temporal dynamics in the Northern Forest (Northeastern USA). Forest Ecology and Management. [↑](#footnote-ref-71)
71. Attachment 7 to Draft EA Comments, Davis *et al*. 2009. Forest carbon sequestration changes in response to timber harvest. Forest Ecology and Management 258, 2101–2109. [↑](#footnote-ref-72)
72. *See* Attachment 11, Brown, S.L., Schroeder, P., Kern, J.S., 1999. Spatial distribution of biomass in forests of the eastern USA. *Forest Ecology and Management* 123: 81-90. [↑](#footnote-ref-73)
73. *See* Attachment 11, Cartwright, J.M., and Wolfe, W.J., 2016, Insular ecosystems of the southeastern United States—A regional synthesis to support biodiversity conservation in a changing climate: U.S. Geological Survey Professional Paper 1828, 162 p., http://dx.doi.org/10.3133/pp1828. [↑](#footnote-ref-74)
74. *See* Attachment 11, U.S. Department of Agriculture, Forest Service. 2011a. National roadmap for responding to climate change. FS957B. Washington, D.C.: U.S. Department of Agriculture, Forest Service. 32 p. http://www.fs.fed.us/climatechange/pdf/Roadmapfinal.pdf. [↑](#footnote-ref-75)
75. *See* Draft EA Comments at 37. [↑](#footnote-ref-76)
76. See Attachment 11, Thompson, I.; Mackey, B.; McNulty, S.; Mosseler, A. 2009. Forest Resilience, Biodiversity, and Climate Change: a synthesis of the biodiversity/resilience/stability relationship in forest ecosystems. Secretariat of the Convention on Biological Diversity, Montreal. Technical Series no. 43. 1-67. [↑](#footnote-ref-77)
77. See Attachment 11, Dominik Thom, Marina Golivets, Laura Edling, Garrett W. Meigs, Jesse D. Gourevitch, Laura J. Sonter, Gillian L. Galford, William S. Keeton. **The climate sensitivity of carbon, timber, and species richness covaries with forest age in boreal–temperate North America**. Global Change Biology, 2019; DOI: 10.1111/gcb.14656. [↑](#footnote-ref-78)