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Via online submission at https://cara.fs2c.usda.gov/Public//CommentInput?Project=65183

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Re: Comments on Draft Environmental Assessment for Dunlap Creek Vegetation Management Project

Dear Kevin,

Thank you for the opportunity to comment on the Draft Environmental Assessment ("Draft EA") for the proposed Dunlap Creek Vegetation Management Project ("the Project"). Please accept these comments on behalf of the Southern Environmental Law Center and the Virginia Wilderness Committee.

We appreciate the hard work that the Forest Service put into the preparation of this analysis. We also recognize that the Draft EA is just that—a draft—and that the Forest Service may collect additional information and further analyses. That said, we are concerned that the Draft EA fails to adequately analyze the environmental impacts of the Project in contravention of the National Environmental Policy Act ("NEPA") and that parts of the proposed project violate the National Forest Management Act ("NFMA"). We also believe that, without substantive changes to the proposed action, the Project may have significant effects on the human environment, triggering the need to prepare an environmental impact statement ("EIS").

I. The Draft EA's NEPA analysis is inadequate.

A. The Draft EA fails to consider the full range of reasonable alternatives.

The Forest Service developed two alternatives: the prosed action and a no-action alternative. Instead of adopting this all-or-nothing approach, the Forest Service needs to develop some reasonable middle-ground options.[1] As discussed more below, we recommend studying and adopting the following reasonable alternatives in place of the action alternative:

[1] The Forest Service cannot define the level of performance that will satisfy the purpose and need of a project "so narrowly as to preclude a reasonable consideration of alternatives" or omit the no-action alternative from detailed study simply because it purportedly does not accomplish the project purpose and need. *Wyoming v. U.S. Dep't of Agric.*, 661 F.3d 1209, 1244 (10th Cir. 2011); 40 C.F.R. § 1502.14 (requiring agency to include no action alternative in its alternatives analysis).

1. An alternative in which the proposed silvicultural treatments proportionately track the departure levels in the ecological departure analysis (i.e., increasing the amount of thinning to achieve open canopy and decreasing the amount of regeneration logging for early succession habitat);
2. An alternative that prioritizes the ecological importance of old growth *and mature forest,* and promotes a network of old growth areas "that consists of a mix of large, medium, and small patches embedded in a forest matrix dominated by mid and late successional forests where old growth areas are generally interconnected by mature forests."[2]
3. An alternative that avoids timber harvest and road construction within Virginia Mountain Treasure areas and special areas identified by the Virginia Department of Conservation and Recreation's Division of Natural Heritage;
4. An alternative that incorporates the George Washington and Jefferson National Forest Travel Analysis Report for all forest service roads to be used; and
5. An alternative that drops units predominantly located on slopes over 35% and soils with severe erosion risk.

B. <u>The ecological departure analysis indicates an overemphasis on early succession habitat.</u>

Because we believe that ecological restoration should drive the project, we are glad that the Forest Service completed an ecological departure analysis, which should guide the priority-setting for management within the Project area. Specifically, the proposed silvicultural activities should proportionately track the ecological needs identified in the departure analysis.[3] In other words, the scale of the proposed solutions should address the scale of the actual problems.[4] Here, the departure analysis indicates several things: (1) the biggest need in oak and pine forests is to move from closed canopy to open canopy, and (2) the ecological need for early succession is much lower:

[2] GEORGE WASHINGTON NATIONAL FOREST, REVISED LAND AND RESOURCE MANAGEMENT PLAN B-5 (Nov. 2014) [hereinafter "Forest Plan"].
[3] Draft EA at 2–3.
[4] NEPA also requires proposed action to match the identified issue: "agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'" *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.,* 463 U.S. 29, 43 (1983); *N. Carolina Wildlife Fed'n v. N. Carolina Dep't of Transp.,* 677 F.3d 596, 603 (4th Cir. 2012).

	Open Canopy		Early Succession
Oak Forest:	64% Departure[5]	vs.	7% Departure[6]
Pine Forest:	78% Departure[7]	vs.	11% Departure[8]
Proposed Action:	60% Thinning to achieve open canopy[9]	vs.	40% Regeneration to achieve early succession[10]

Yet, despite the relatively low need for early succession habit, the proposed action in 40% of the units would be regeneration harvest. If oak and pine forest are only 7% and 11% departed from early succession, why are 40% of the proposed silvicultural acres aimed at achieving early succession habitat through regeneration? Conversely, if oak and pine forest are 64% and 78% departed from desired open canopy conditions, why are only 60% of the Project silvicultural acres aimed at achieving open canopy through thinning? We urge the Forest Service to bring the proposed action into better alignment with the ecological needs in the project area.

It is also worth noting that there appears to have been a significant amount of logging to achieve early succession habitat in the Project area in recent years. For example, Google Earth shows a significant amount of logging around the Eastern Project Area in recent decades. These areas of early succession habitat should also be considered in the Forest Service's analysis of departure in the larger landscape, as well as cumulative impacts of additional regeneration harvest being proposed in the area with this project.

[5] 67% desired – 3% existing = 64% departure. *See* Draft EA at 2.
[6] 12% desired – 5% existing = 7% departure. *See* Draft EA at 2.
[7] 79% desired – 1% existing = 78% departure. *See* Draft EA at 2.
[8] 13% desired – 2% existing = 11% departure. *See* Draft EA at 2.
[9] 632 acres thinning out of 1,061 acres of commercial harvest = approximately 60%. *See* Draft EA at 5.
[10] 429 acres thinning out of 1,061 acres of commercial harvest = approximately 40%. *See* Draft EA at 5.

See completed logging within black outline of Eastern units.

C. <u>The Draft EA does not assess the nature or extent of impacts to cove forest within the Project area.</u>

The Draft EA also indicates that there is cove forest within the Project area. What percentage of the Project area is cove forest, and is there proposed management within predominantly cove forest? If so, where? We ask that the Forest Service provide this information, as it will help us better understand impacts on cove forest, which as you know is closed-canopy forest. We will follow up with any comments as needed once we have this information.

D. <u>The Draft EA does not adequately assess existing old growth stands, and there are inconsistencies both within the Forest Service's reports on old growth and between Forest Service reports and on-the-ground conditions.</u>

We are glad the Forest Service has excluded existing old growth from harvest and has committed to removing from treatment any additional old growth that is discovered in the future.[11] To help evaluate aspects of the Draft EA related to the protection of old growth and mature forest, we asked Jessica Bier to conduct fieldwork in specific units within the project area.[12] She did so from April 14-17, 2024 and was assisted by Wayne Browning in this work.[13] Based on their on-the-ground review and a review of Google Earth satellite imagery, it appears that many of the areas surrounding proposed logging units were harvested in the last 40 years, and this Project targets mature stands that were left.

It is important to view logging proposals in the context of Executive Order 14,072, which requires agencies—including the Forest Service—to inventory mature and old growth forests, analyze the threats they face, and develop "policies . . . to institutionalize climate-smart management and conservation strategies that address threats to mature and old-growth forests on Federal lands."[14] The Forest Service is now going through a rulemaking to do so. This is critical. Southern mature and old growth forests play an outsized role in providing habitat, carbon storage, climate resilience benefits, and connection with nature.

With this Project, we urge the Forest Service to also recognize the important role of mature forests and analyze the impacts of proposed logging in such areas. In addition to zooming in to evaluate whether a patch keys out as old growth under regional guidance, we encourage the Forest Service to also zoom back out and consider the ecological value of mature stands and how they fit into the matrix of these areas.[15] Through that lens, we have several observations:

1. Overly rigid adherence to the concept of "continuity" of an old growth patch has led to old growth polygons that may protect individual trees but do not protect the character of the old growth patches. In some cases, the size, shape, and position of the old growth patches relative to each other reflect that "continuity" is being considered at too small a scale. In such instances, rather than drawing tight boundaries around old growth patches to be excluded from harvest, we urge the Forest Service to zoom out a bit to take a more ecologically sound and practical approach.

2. A more flexible approach to old growth survey protocol criterion 1- minimum old age trees per acre (TPA) would better conserve existing old growth and mature trees. Region 8 old growth guidance specifically acknowledges that "there is a need for flexibility in applying

[11] Draft EA at 18–19.
[12] Jessica Bier has an M.S. degree in Ecology and Evolutionary Biology from the University of Tennessee Knoxville and a B.S. degree in Environmental Science from Ferrum College. Ms. Bier was a Forestry Technician, USFS Clinch RD George Washington and Jefferson NF, 2006-2016; Biological Technician, USFS Clinch RD George Washington and Jefferson NF, 2003-2006; Biological Technician, NPS Great Smoky Mountains NP, 1999-2003.
[13] Wayne Browning has an M.S. Degree in Climate (Earth) System Geosciences from Mississippi State University and a B.S. Degree in Biology From UVA-Wise.
[14] Exec. Order 14,072 s.2(b), 87 Fed. Reg. 24,851, 24,851 (Apr. 22, 2022).
[15] *See* Forest Plan at B-5 ("Through allocation of management prescription areas, identification of lands unsuitable for timber production, and the current distribution of older aged stands across the Forest, the Forest Plan establishes a network of old growth areas. This network consists of a mix of large, medium, and small patches embedded in a forest matrix dominated by mid and late successional forests where old growth areas are generally interconnected by mature forests.").

this guidance during the field inventory, because [the available] estimates are not absolutes."[16] Particularly in light of the federal mandate to use management and conservation strategies that address threats to mature and old growth forests, we ask the Forest Service to re-consider these units with greater flexibility.

3. Shapes of the buffer boundaries seem overly constrained and by failing to incorporate individual old age trees located nearby (within 0-100' of the boundary), do not seem to achieve the federal mandate to conserve existing old growth and mature forest.

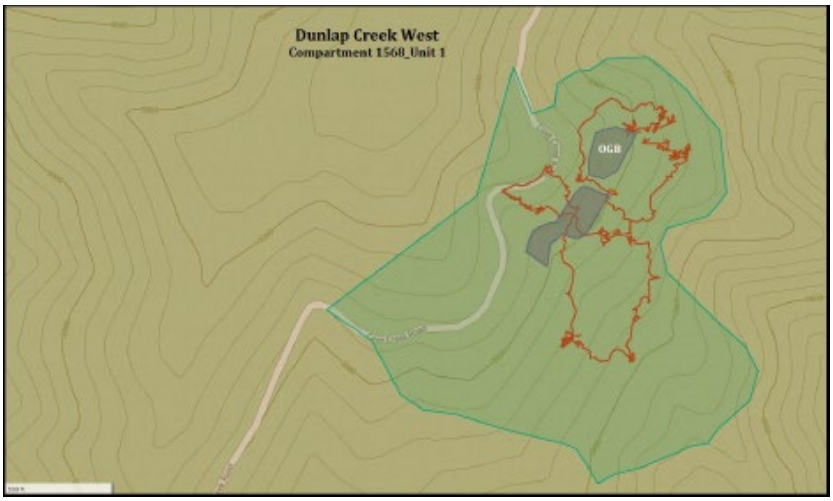
   Ms. Bier observed these in multiple units throughout the project area:

   a. West Unit 1 (1568-0002)

The Forest Service has identified two old growth polygons with an approximately 50' gap between them.[17] However, the majority of the unit exhibited old growth character with numerous old age trees, presence of dead and down trees, standing snags, canopy gaps, and no signs of human disturbance. The condition of the trees (gnarly) combines with the steep and locally rocky terrain does not make harvest seem feasible or worthwhile in this area.

[16] ISFS-Southern Region, *Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region: Report of the Region 8 Old-Growth Team* 25 (June 1997) ("In most cases, the scientific definitions do not contain information regarding the number of trees per acre in this age class. Some estimates were provided for the following forest community types: mixed mesophytic and western mesophytic forest (type 5); xeric pine and pine-oak forest and woodland (type 24); dry and dry-mesic oak-pine forest (type 25); eastern riverfront forest (type 28); and southern wet pine forest, woodland, and savanna (type 29). Based on that information and as a conservative rule of thumb, the age criteria (table 2) is applicable when at least 8 to 10 trees per acre for pine forest community types (possibly fewer trees per acre for savanna conditions) or when at least 30 trees per acre for some deciduous community types are present. There is a need for flexibility in applying this guidance during the field inventory, because these estimates are not absolutes.").

[17] As we have discussed, the Draft EA did not contain a table or mapping that identifies the unit numbers. As a result, we cannot match up unit numbers, compartments and stands, forest type, proposed management, stand age, etc. with a specific location. We appreciate that the Forest Service agreed to produce this information and post it to the Project page, but since we have not yet received it, we have done our best to pull information from GIS data to identify Project areas. We cannot confirm that our understanding of unit and stand numbers matches the Forest Service's current information.



Unit 1- Old Growth areas for Unit 1 with ~50' gap between them.

Flagging from Forest Service Old Growth Tally Sheet Plot 4 was located within the unit. The Forest Service-calculated minimum old age TPA (18.5) fell just short of meeting the old growth criteria, likely due to the wide spacing of old age trees. Regardless, most of the unit observed during walk-though exhibits old growth character. Moreover, the close proximity of another old growth patch (~50') may present logistical reasons that also weigh in favor of merging and adjusting the boundaries of these old growth patches.

Overstory structure and composition south and east of the old growth area boundary (300'+ downslope) were very similar to those in the old growth area, except that old age trees were more widely scattered. Trees with old age characteristics were observed throughout this unit and ranged in size from 18" to 34" dbh.

Four trees in the unit were cored with an increment borer. Attempts to age the cores in the field were unsuccessful. The cores were transported out of the field and rings were counted using a dissecting microscope to determine age. Results indicated that the majority of these trees exceed the minimum old age criterion (120 years) for old growth determination of this old growth community type (Type 25):

- Pitch pine: 15" dbh/128 years (~100' east of old growth area boundary)
- Chestnut oak: 25.1" dbh/131 years (~30' north of old growth area boundary, core fell short of center, tree older than indicated, estimated 160+ years)
- Chestnut oak: 15.9" dbh/86 years (~200' to east of old growth area boundary, core offset from center, tree older than indicated)
- White oak: 18.9" dbh/220 years (~325' south of old growth area boundary)

Old age trees with minimal trunk tap and high sinuosity branching.

Downed trees in various stages of decay.

LiDAR east to southeast of Cove Creek Road. There were no signs of human disturbance in this area, as suggested by LiDAR.

b. West Unit 3

The location of the old growth boundary where the old roadbed meets State Road 603 appears somewhat arbitrary, because the overstory structure and composition outside the boundary is very similar to what was observed inside the boundary.

c. West Units 4 and 5

We encourage the Forest Service to re-evaluate the old growth boundaries of these units. The narrow necks and fingers of these old growth polygons do not adequately protect existing old growth in these patches.

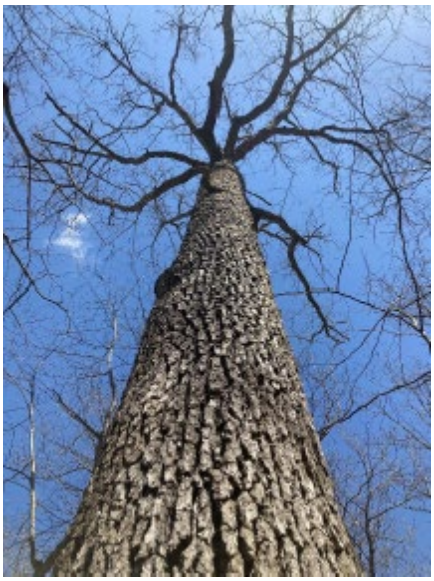
d. Central Unit 11

Many old age trees were scattered throughout the unit, with local groupings. The location of the old growth area boundary missed several nearby old age trees. Old age trees were also observed along a track to the west and northwest of the old growth boundary. Though spacing between old age trees was relatively wide in some areas, there were locations with occasional groupings of these old age trees that probably meet old growth criteria (see photos below). These locations extended 500'+ from the old growth area boundary.

Groupings of old age trees that likely meet old growth criteria.

The western portion of the unit adjacent to Forest Service Road 277 had scattered old age trees in occasional groupings.

The structure and composition of the overstory observed immediately east of the old growth boundary were very similar in appearance to those observed within the boundary. The location of the western boundary again seemed arbitrary, given there were old age trees located from this boundary eastward for at least 150'+ (see photos below).




Old age trees outside of Central Unit 11 old growth area boundary.

In the area north of the old growth area, old age, larger diameter oaks were widely scattered with localized groupings. Old growth criteria were met in a variable radius plot taken by Ms. Bier and Mr. Browning on top of the ridge. A 14" dbh chestnut oak in this plot was 100+ years old, indicating the much larger trees were likely much older. The area surrounding this plot location had an appearance similar to Western Unit 3.

e. Central Unit 10

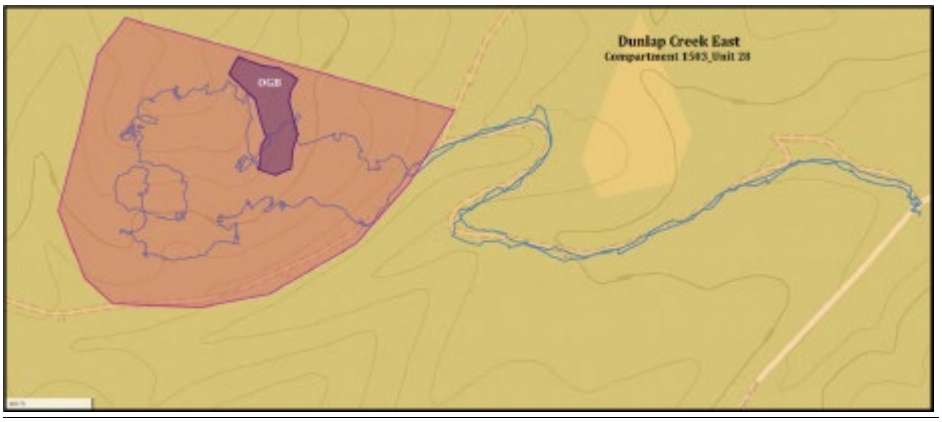
Old age trees were scattered with localized groupings, especially to the southwest of the old growth boundary. An area with a higher density of larger diameter, old age trees was found ~250' southwest of the southwest point of the old growth area (see photos below).

Old age trees southwest of the old growth boundary.

f. Central Unit 9

The second old growth patch listed in Draft EA Table 6 as 1535-0025 is located at the end of a "finger" that extends towards the west and buffers Plot 1, in which old growth criteria were met. Though listed in the table, it does not show up in the GIS layer we received. The Forest Service should update the Draft EA maps and GIS files to incorporate this patch of old growth.

g. East Unit 28



Map of Dunlap Creek East Unit 28.

In the western portion of Unit 28, a flag line was found around tally sheet Plot 9. The tally sheet indicates that this was "not [a] continuous acre of OG, no buffer." Accordingly, this area is not included in the Draft EA as old growth. However, Ms. Bier's field survey showed that old growth character is clearly evident well past the flag line (150'+ to the north and south, and 175' to the west to the unit boundary) in an area that exceeds one acre. We urge the Forest Service to take another look at this area.

West of the northern portion of the old growth boundary in Unit 28, old age chestnut oak and yellow pine are scattered. Although the minimum old age TPA criterion may not be met between the boundary and the top of the ridge, the area has old growth character and likely exceeds one acre. To help estimate the stand age, a yellow pine (18.8" dbh was cored). This tree was 135+ years old.

Off the top of the ridge on the western slope, short, twisted old age chestnut oaks were observed. One of the smaller chestnut oaks (15") (which appeared to be one of the younger-looking of these old age trees) was cored. Only a 4" core on the outer part of the tree was obtained because of a rotten void. Using a dissecting microscope, 130 rings were counted in this 4" section. The trees in this area were sampled in a variable radius plot and the old age TPA criterion was met.

Measuring the trees in a variable radius plot.

The old growth boundary was flagged. The area east of the boundary contained widely scattered old age chestnut oak and yellow pine with some scattered groupings. Mature/possibly old age yellow pine are present 100'+ outside the southwest old growth boundary in an area with old growth character.

Another area with old growth character that probably exceeded an acre was observed south of the old growth patch identified by the Forest Service. A 10.2" chestnut oak that looked old in this location tree was cored. A full core was not obtained because a rotten void was encountered, but the 3.2" inch core section had over 100 rings. The Forest Service should visit Unit 28 again and determine if the boundary should be extended.

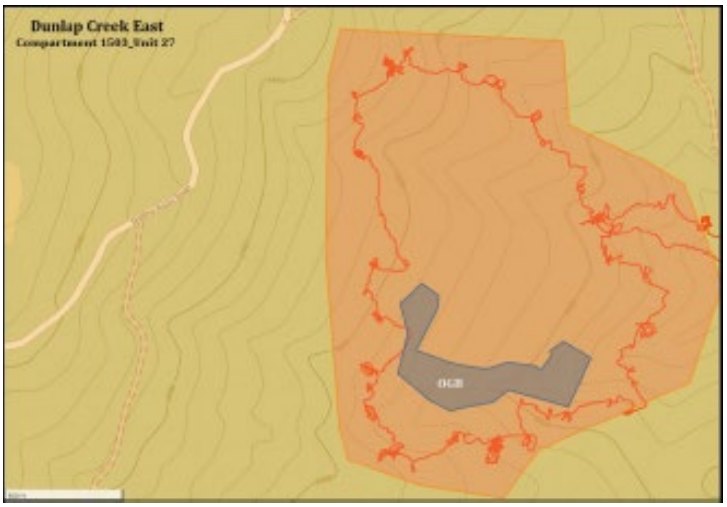
h. Central Unit 7

According to the tally sheet for Unit 7 (1535-006), Plot 5 was taken in Old Growth Forest Type 5 - Mixed Mesophytic (OGFT 5). Why was this unit excluded from old growth inventory? If due to minimum DBH Old TPA, we urge the Forest Service to re-examine this area using the proper 10 basal area factor (BAF) prism. The Forest Plan directs that newly discovered patches of OGFT 5 will be managed to retain their old growth character.[18]

i. East Unit 27

[18] Forest Plan at Appendix B, B-7.

Much of this unit observed along Ms. Bier's track had old growth character (see orange line track below).



Line track traveled by Ms. Bier and Mr. Browning around East Unit 27.

There are many large diameter (24-36" dbh), old age trees scattered throughout the unit with localized groupings (primarily chestnut oak). Several very large diameter trees (36-47" dbh) were encountered along the track. Smaller trees (15-16" dbh) were verified to be old (~150 years) with cores.

Several very large diameter trees (36-42" dbh) that are relatively scarce on the Forest were also encountered.

46.8” Chestnut oak.

Areas with smaller diameter (14-18” dbh) trees that appeared old were also observed (see photo below). Old age was confirmed with cores from two smaller trees near the northwestern corner of the unit and one cored 100’ to the west of the old growth area.

- Chestnut oak: 16.3” dbh/169 years
- Chestnut oak: 15.2” dbh/149 years
- Chestnut oak: 15.2” dbh/152 years

Smaller diameter old age trees.

In light of the above, the old growth area boundary location appears arbitrary. A variable radius plot 100’ to the west of the old growth area met Forest Service criteria for old growth, and there are many old age trees near the old growth area boundary. Old growth character extends to the unit boundary (west and south). There is recent oak mortality in the area with many standing snags and downed large diameter oaks in different stages of decay (see photo below). Moreover, narrow necks and fingers of old growth polygons, such as Unit 27 and Unit 25 (discussed below) do not adequately protect existing old growth.

Downed large diameter oaks outside the old growth area boundary for East Unit 27.

There were no signs of significant human disturbance within the unit observed during this field survey and lack of disturbance was confirmed by LiDAR.

Observe a large area with a lack of visible disturbance between Jingling Rocks Road and Rumsey Road. This covers essentially all of Unit 27 and much of Units 25 and 28.

j. East Unit 25

On the eastern end of the unit, old age chestnut oaks are located south and east of the old growth boundary. There was no detectable difference in structure and composition inside and outside the old growth boundary. Old age trees are present south to the unit boundary and downslope (a thinning unit).

There are large diameter, definitively old age trees located near (25-50' from) the old growth area. The area immediately north of the western half of the old growth area is mature and exhibits a degree of old growth character (see photo below). The Forest Service should incorporate these old age trees into the boundary.

Open patch in mature stand.

The area south of the western portion of the old growth area and extending downslope of the unit boundary has old growth character and should be included in the old growth area. There is an area between Unit 25 and Unit 22 that is extremely steep and excluded from treatment. It is likely the site of a historical landslip/slide.

k. <u>East Unit 22</u>

The area around Plot 6 in Unit 22 exhibits a high degree of old growth character with many large diameter trees (white oak, yellow pine, white pine). The minimum old age TPA was not met, likely due to the wide spacing of the large trees at that specific location. The Forest Service should re-consider this area (see photos below).

Tulip Poplar and Yellow Pine at Plot 6.

4. The Draft EA and related GIS data do not sufficiently show whether skid trails and temporary roads will go through old growth.

The Forest Service should ensure that no temporary roads or skid trails are placed within old growth patches. With current GIS data, it looks as if that may be contemplated in at least West Units 3 and 5 and Central Unit 10. This is not acceptable and is very likely to lead to damaged old age trees. If there are any instances in which the Forest Service thinks that will be unavoidable, it should disclose that now and evaluate impacts.

5. There are inconsistencies in the Draft EA and mapping of old growth areas.

Although it is difficult to confirm until updated Forest Service maps with unit numbers are provided, it appears that some of the old growth patches listed in Table 6 (including Units 9, 28, 31, 33, 34) of the Draft EA do not appear in the maps. Conversely, it seems that an old growth patch at 1503-19 is identified in maps but not in the Draft EA. It also seems that Unit 9 or 10 may have the wrong Compartment/Stand listed. Lastly, there may be a typo in the Compartment for Unit 11. The Forest Service should correct these items in the Final EA and mapping.

Our past experience provides an illustration of why ensuring total consistency between the NEPA documents and mapping is crucial. During project planning for the Lower Cowpasture Restoration and Management Project on the James River and Warm Springs Ranger Districts, the Forest Service performed old growth surveys and disclosed them to the public. We reviewed the old growth tally sheets and flagged several areas of concern, which resulted in Forest Service staff revisiting stands and, in some cases, concluding that they qualified as old growth and should be excluded from harvest. Unfortunately, maps were not updated correctly and staff laying out the relevant unit did not flag the old growth exclusion. The unit was sold and the old growth was logged in contravention of NEPA documents.

6. There are outstanding questions about the mechanics of old growth surveys conducted for preparation of the Draft EA.

In addition to the above substantive concerns, we also have a few questions about how the old growth data was gathered. First, a single person (Cole) surveyed around 62 old growth plots on September 25, 2023. This is impossible. Even assuming they worked during approximately 13 hours of daylight at that time of year, they would have to complete nearly five surveys per hour with no time for breaks or travel, which is not possible. Were these old growth stand exams done in the field? Were they old growth stand exams or common stand exams? And if these data were gathered during common stand exams, was a proper old growth survey performed for each? Regardless, it is not possible to gather this much data in one day, so we would like to understand better how these surveys were completed.

Second, a company called compasspoint seems to have gathered data for about half of the units in spurts over the past several years: in west units on a few days in April and July 2021 and then January 2024, and in central units on a few days in May and June 2021, with Cole also completing some units in September 2023. Compasspoint data were entered electronically into the tally sheets, but then someone edited some of the data and results related to Minimum Old Age TPA and Minimum DBH TPA. This is reflected in handwritten edits. Who made these changes? Were they based on additional field review by the person making edits? If not, what were they based on? And what does asterisk in "N*" refer to in the "OG Criteria Met" row?

Regarding compasspoint surveyors, how were they trained to conduct old growth surveys? Did they receive and review the cover sheet with narrative for the tally sheet that provides additional, critical instruction?[19] Did they receive the photo guide depicting typical characteristics of old age trees. Were biologists "encouraged to participate as well since they would provide another 'pair of eyes' that may identify potential patches through different survey methods"?[20]

Third, some old growth tally sheets indicate that plots were sampled using a 20 basal area factor (BAF) prism, while the George Washington and Jefferson National Forest Survey Protocol indicates that 10 BAF prisms should be used. It is possible that this resulted in an undersampling of smaller diameter old age trees that have higher TPA equivalent values.

E. <u>The Draft EA fails to consider the compounding effects of climate change or cumulative impacts on carbon storage.</u>

NEPA regulations require agencies to consider the "cumulative effects" of their actions.[21] Cumulative effects are *currently* defined as "effects on the environment that result from the incremental effects of the action when *added* to the effects of other past, present, and reasonably foreseeable actions."[22] The Forest Service, however, appears to be using a definition of cumulative impact sourced from the 1978 NEPA regulations.[23] While there is no material difference between these two cumulative-effects standards, it begs the broader question: is the Forest Service relying on the 1978 or the 2022 NEPA regulations for its overall analysis? The agency must clarify its position in its revised NEPA analysis. The differences between other provisions of these two sets of regulations *are* material, and bear on some of the issues discussed in these comments.

[19] Narrative for the tally sheet is attached to these comments as Attachment A.
[20] Tally sheet cover page at 2.
[21] 40 C.F.R. §§ 1501.3, 1508.1(g)(3) (2022).
[22] *Id.* § 1508.1(g)(3) (emphasis added).
[23] *See* Draft EA at 12 (citing the old definition of cumulative impact found at "40 CFR 1508.7," a section no longer found in the Code of Federal Regulations).

As explained above, a proper cumulative-effects analysis requires an agency to consider "the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions."[24] This includes the reasonably foreseeable effects of climate change.[25] It also includes the effects "from individually minor but collectively significant actions taking place over a period of time"[26]—like the aggregate impacts of the Forest Service's timber projects on carbon storage.

To its credit, the Forest Service includes a project-level carbon assessment report in Appendix C to the Draft EA. However, this analysis is flawed in several ways: (1) it fails to consider effects to the Project area "when added to" the compounding effects of climate change; (2) it fails to add the effects of the Project on carbon storage to the incremental effects of other timber projects; (3) it provides inconsistent levels of timber harvest from 1990-2011, which could have led to inaccurate conclusions about carbon storage impacts; and (4) it appears to pull improper data from the Birdsey report, thereby miscalculating loss of non-soil carbon stocks on the George Washington and Jefferson National Forests associated with timber harvest.

First, a proper cumulative-effects analysis would consider the additive effects of the Project and climate change *on the Project area*. For example, we already know that "[e]ach treatment would have the potential [for] introducing and spreading non-native invasive plant species"[27] and increase sediment loads in certain watersheds by as much as 130%.[28] We also know that climate change may exacerbate these effects: "[w]armer temperatures could increase the number and intensity of wildfires" in the South, "as well as outbreaks of damaging forest pests," including non-native invasive species;[29] and "climate change is also expected to increase the frequency and intensity of flooding, and thus sedimentation."[30] Considering all of these impacts together within the Project area—as the agency must—shows that the Project's potentially significant impacts on non-native-invasive spread and sedimentation, among other things, will be made *even worse* by the compounding effects of climate change. These compounding effects are not addressed in the Draft EA.

Second, the Forest Service fails to *add* the carbon-storage effects of the Project to the "individually minor but collectively significant" carbon-storage effects of other Forest Service logging projects. Instead, the Forest Service simply weighs the size and carbon storage impacts of this Project relative to the George Washington National Forest, as well as the nation and globe:

- "Carbon losses from the forest ecosystem associated with harvests have been *relatively small compared to the total amount of carbon stored in the forest*, with

[24] 40 C.F.R. § 1508.1(g)(3).
[25] *Appalachian Voices v. U.S. Dep't of Interior*, 25 F.4th 259, 271 (4th Cir. 2022) (holding that "[i]t is clear . . . that climate change typically must form part of the [cumulative-effects] analysis in some way").
[26] *Id.*
[27] Draft EA at 22.
[28] Draft EA at 62.
[29] EPA, *Climate Impacts in the Southeast*, https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-southeast_.html; *see also* U.S. Geological Survey, *Assessing Climate-Sensitive Ecosystems in the Southeastern United States* (2016), https://pubs.usgs.gov/of/2016/1073/ofr20161073.pdf.
[30] *Appalachian Voices*, 25 F.4th at 278.

losses from 1990 to 2011 equivalent to about 0.09 percent of non-soil carbon stocks."[31]

- "[The] scope and degree of change [from the Project] would be minor, *affecting substantially less than 1 percent of the 1.1 million acres of forested land in the George Washington*."[32]

- "Considering emissions of GHGs in 2010 were estimated at 13,336 ± 1,227 teragrams carbon globally (IPCC 2014) and 1,881 teragrams carbon nationally (US EPA, 2015), the Dunlap Creek project makes an *extremely small direct contribution to overall emissions*."[33]

- "[T]his proposed project affects a relatively small amount of forest land and carbon on the George Washington and might temporarily contribute an extremely small quantity of GHG emissions *relative to national and global emissions*."[34]

At no point does the agency add the effects of this project to those of other timber projects, thereby failing to properly analyze cumulative carbon storage impacts.

Third, the carbon assessment report inconsistently states timber harvest levels on the George Washington National Forest from 1990-2011. The Forest Service states that from 1990-2011, timber harvest has "typically affected less than 0.25 percent of the forested area annually,"[35] which would be around 2,700 acres per year and about 58,000 acres over the 22-year period. Then the Forest Service states that during that same time period, "about one percent of the forested area experienced some level of harvest treatments,[36] which would be around 11,000 acres over the 22-year period. And when we look at Timber Cut and Sold reports for the entire George Washington and Jefferson National Forest that we received from the Forest Service, it looks like around 62,000 acres were cut and sold across both forests during the 22-year period. What is correct? In order to accurately analyze carbon storage impacts, it is important to work with accurate and consistent underlying data.

Fourth, it is unclear how the Forest Service concluded that timber harvest from 1990-2011 resulted in the loss of approximately "0.09 percent of non-soil carbon stocks."[37] The report cites Birdsey *et al.* (2019) to support this statement. However, we cannot find this figure in the Birdsey report. Figure 19 in the Birdsey report suggests that harvesting on the George Washington and Jefferson National Forests caused a 1% to 2% loss of non-soil carbon.[38] Within the entire Southern Region, harvests caused a 2.4% loss of non-soil carbon stocks.[39] While these may seem like small discrepancies, they have a significant impact. For example, if the George Washington and Jefferson

[31] Draft EA, Appendix C: Project-Level Carbon Assessment Report at 2 (emphasis added).
[32] *Id.* (emphasis added).
[33] *Id.* at 3–4 (emphasis added and internal footnote omitted).
[34] *Id.* (emphasis added).
[35] Draft EA, Appendix C: Project-Level Carbon Assessment Report at 2.
[36] *Id.* at 2.
[37] *Id.*
[38] RICHARD BIRDSEY ET AL., ASSESSMENT OF THE INFLUENCE OF DISTURBANCE, MANAGEMENT ACTIVITIES, AND ENVIRONMENTAL FACTORS ON CARBON STOCKS OF UNITED STATES NATIONAL FORESTS 4, 41 (Nov. 2019).
[39] *Id.* at 4.

National Forests had a 2% reduction in carbon stocks from harvest instead of 0.09%, the carbon assessment report for this Project could be underreporting carbon losses by a factor of 21. We believe the Forest Service needs to re-examine its data and analysis of carbon storage impacts from this Project.

F. The Draft EA fails to consider impacts to State-Designated Conservation Sites and Virginia Mountain Treasures.

The July 29, 2015 Clarification Letter regarding the George Washington National Forest Plan requires the Forest Service to consider impacts in project-level planning and analysis to Distinctive or High Public Interest Areas, including areas identified in The Wilderness Society's *Virginia's Mountain Treasures*, "[a]s concerns about the characteristics of any such area are identified in project-level scoping by the public, Forest Service Staff, or others".[40] Importantly, among the most important attributes of these areas is old growth forest. Both Slaty Mountain and Snake Run Ridge contain identified old growth stands, and the Virginia Department of Conservation and Recreation's Division of Natural Heritage (DNH) states in its comments that a DCR biologist has "identified one of the largest intact patches of old growth forest in Virginia and possible the central Appalachians" within the Peters Mountain North – Bennetts Run Conservation Site.[41] DNH "supports excluding forest treatments from the identified old growth patches within *or around* this occurrence."[42]

The Forest Service also needs to explicitly consider the impacts of proposed management activities on the Snake Run Ridge and Slaty Mountain Virginia Mountain Treasures areas. Although we and other commenters raised concerns about potential impacts of planned commercial logging in these areas, the Forest Service did not assess these potential impacts in the Draft EA.[43] Nor did the Response to Comments respond to these comments.[44] The Final EA needs to do so. We urge the Forest Service to evaluate the impacts in these areas of any timber harvest and roadbuilding and then modify the Project to avoid or minimize such impacts.

G. The Draft EA and associated reports contain discrepancies regarding stream crossings.

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[40] *See* Letter from H. Thomas Speaks (USFS) to Record Regarding Clarification of the 2014 George Washington National Forest Revised Land and Resource Management Plan 1–2 (July 29, 2015), https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3850362.pdf.

[41] *See* Nicki Gustafson, Virginia Dep't of Conservation and Recreation's Division of Natural Heritage comments on Draft EA 2 (Apr. 24, 2024); *see also* Virginia's Mountain Treasures: The Unprotected Wildlands of the George Washington National Forest 88, https://www.vawilderness.org/uploads/1/7/4/4/17446555/virginia_mountain_treasures_overview.pdf.

[42] *See* Nicki Gustafson, Virginia Dep't of Conservation and Recreation's Division of Natural Heritage comments on Draft EA 2 (Apr. 24, 2024) (emphasis added).

[43] Letter from Spencer Gall, Southern Environmental Law Center, to Kevin Kyle, U.S. Forest Service, Regarding Dunlap Creek Vegetation Management Project Scoping 1–2 (Dec. 15, 2023).

[44] *See* Draft EA, Appendix B: Scoping Comments and Concerns 3–4, 9–10, 19–20 (responding briefly to comments about the impact of the project and road construction on Snake Run Ridge and Slaty Mountain, as well as concerns about old growth in these areas, without consideration of specific impacts to Virginia Mountain Treasures raised by commenters); *see generally* Draft EA (including no discussion of potential impacts to Snake Run Ridge and Slaty Mountain Virginia Mountain Treasures).

There are discrepancies between the Draft EA and Soil and Water Report regarding stream crossings in the Sweet Springs Creek-Cove Creek watershed. The Draft EA provides that there will be three skid trail crossings, while the Soil and Water Report provides there will be two dozer fireline crossings.[45] Which is correct? The Forest Service should clarify these impacts in the Final EA, as accurate information about the number and type of crossings is important to evaluating impacts to water quality and sedimentation.

In addition, Ms. Bier noted that East Unit 28 is located north of State Road 600 which has extensive areas of autumn olive and multiflora rose. A section of Forest Service Road 3555 which is unmaintained/gated runs adjacent to a stream and in one location is only ~8' from the stream channel, and then crosses the stream (failed culvert). Does the Forest Service intend to use this area?

Forest Service Road 3555, which is unmaintained/gated.

H. <u>The Draft EA fails to consider the impacts of some roads planned as part of management activities under the Project</u>

The Draft EA states that "all the identified roads needed for this Project have been determined to be part of the minimum road system needed by the Forest Service to perform work. . . . For the purposes of the DCVMP, all the roads within the Project area have been analyzed in regard to haul routes, open or closed status, the need for any work to be performed to facilitate access, and how public access could be affected. The spatial bounds of the analysis of effects are limited to FSRs within the Project area."[46] The Draft EA, however, does not discuss any forest system roads in the Western area units. That seems incorrect. For example, it appears that the Forest Service planning to use Roads 367 and/or 367A. The TAP recommends both of those roads for decommissioning. Has any reevaluation of these roads occurred? Why are they not discussed in the Draft EA? We look forward to learning more about these roads (and any others in a similar situation) and will provide additional comments as needed once we have that information.

II. The Draft EA lacks information needed for the public to provide meaningful comments on the proposal, particularly site-specific information.

[45] *Compare* Draft EA at 60, Table 21 and Draft EA, Appendix C: Soil and Water Resources Report at 10.
[46] Draft EA at 67.

As we have discussed, the Draft EA did not include the information needed for us to be able to understand the analysis at the site level. Specifically, the Draft EA did not contain the table that matches up the Unit Number, Compartment/Stand, Stand Age, Acreage of Unit, and Forest Type. Nor do the maps included in the Draft EA provide unit numbers. As a result, we are not able to understand the specific sites at which specific management is being proposed. We are glad that you are generating that information and will provide additional comments based on that information as needed.

In addition, the slope maps were indecipherable. Due to the scale of the map and opaqueness of the proposed action, we cannot see the slope of proposed units. Moreover, the Forest Service should match up the information it provides regarding erosion risk based on soil type with slope. Doing so helps the Forest Service understand the highest risk areas so that it can avoid or at least mitigate risks. This information should be included in the Draft EA so the public can evaluate it. The information needed to conduct this analysis is readily available for download and GIS analysis. In order to ensure that ground disturbing activities would not risk erosion and sedimentation of creeks and rivers, we believe the Forest Service should avoid ground-based logging on areas with steep slopes (over 35%) and high erosion-hazard soil types. We urge the Forest Service to provide better information regarding soil type/erosion risk and slope at the site level and then modify the Project to avoid logging in units predominantly located on slopes over 35% and with soils with severe erosion risk.

Lastly, the BE/BA should have been included in the Draft EA so that public has a chance to review and comment on the content. Although the Response to Comments states that these documents would be included as attachments, they are not.[47] While the Draft EA itself includes some discussion of threatened, endangered, sensitive, and locally rate species, it fails to mention any consultation related to certain federally- and state-designated species, including the Shale Barren rock cress and Western Wallflower.[48] Without making these key documents readily accessible at the Draft EA stage, the public can FOIA documents, which generally takes longer to receive than the comment period allows. As a result, the only option to comment on the analysis within these documents is to file an administrative objection, which is not ideal. Please publish these documents with the Draft EA. Once we have reviewed the BE/BA, we will provide additional comments as needed.

We understand that the Forest Service is still undertaking consultation with the U.S. Fish and Wildlife Service (USFWS) regarding potential impacts of the Project to the Northern Long-eared Bat utilizing USFWS's Interim Consultation Framework.[49] The Standing Analysis and Interim Consultation Framework only addresses activities that are expected to take place between March 31, 2023 and November 30, 2024. If activities on the Project are expected to take place beyond November 30 of this year and the Forest Service receives a Biological Opinion that relies on the Standing Analysis and Interim Consultation Framework, the Forest Service "will need to

[47] Draft EA Response to Comments ("The Forest Service will include relevant resource information in the Draft EA as determined through the scope of required analysis. This includes a full Biological Assessment, Biological Evaluation, and Soil and Hydrology report. These reports will be referenced within the Draft EA and included as attachments."). Related, it is very helpful for the Forest Service to provide page numbers for all documents so that we reference the relevant page when discussing an issue.
[48] *See* Draft EA at 35–36; Nicki Gustafson, Virginia Dep't of Conservation and Recreation's Division of Natural Heritage comments on Draft EA 1 (Apr. 24, 2024).
[49] Draft EA at 35.

reinitiate consultation if its continuing, discretionary action is expected to affect the [Northern Long-eared Bat]."[50] The Forest Service's analysis thus far has indicated that the Project may adversely affect the Northern Long-eared Bat.[51] We expect that, if management activities associated with the Project are expected to continue beyond November 30, 2024, then the District will reinitiate consultation with the U.S. Fish and Wildlife Service to maintain Section 7 compliance and ensure that the Project remains based on the best available information.

Further, because the Forest Service's analysis thus far has indicated the Project may adversely affect the Northern Long-eared Bat,[52] we expect that the Forest Service should also refrain from the following activities before the Fish and Wildlife Service issues its Biological Opinion and Incidental Take Statement:

- Disturbance associated with human activities during the active season that is significant enough to result in Northern Long-eared Bats fleeing occupied roost trees during the daytime. This could include activities producing noise, exhaust, and vibration, such as operating heavy machinery;
- Prescribed fire during the active and pup seasons, as well as during the cold winter months (December 15 – February 15);
- Work on bridges and culverts greater than four feet in diameter where Northern Long-eared Bats are roosting during the active season; and
- Collision risk resulting from construction of new roads within 1,000 feet of documented habitat.[53]

The Fish and Wildlife Service identifies these activities as "reasonably certain to result in incidental take" of Northern Long-eared Bats and restricts these activities and others until USFWS issues an Incidental Take Statement.[54]

III. The Forest Service's limited analysis reveals that the action alternative for the Project may have significant effects, necessitating an EIS.

For the reasons explained above, the Forest Service's Draft EA fails to adequately disclose and analyze the environmental impacts of the Project. The limited analysis the agency did conduct, however, reveals that the Project may have significant environmental effects.

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[50] U.S. Fish & Wildlife Service, Interim Consultation Framework for the Northern Long-eared Bat 5 (Apr. 8, 2024), https://www.fws.gov/sites/default/files/documents/2024-04/interim-consultation-framework_8apr24.pdf.
[51] Draft EA at 35.
[52] Draft EA at 35.
[53] U.S. Fish & Wildlife Service, Appendix B: Biological Assessment Form for Interim Consultation Framework for the Northern Long-eared Bat 4–5 (Apr. 8, 2024), https://www.fws.gov/sites/default/files/documents/2024-04/app-b-biological-assessment-form-interim-consultation-framework_8apr24.pdf.
[54] U.S. Fish & Wildlife Service, Interim Consultation Framework for the Northern Long-eared Bat 7 (Apr. 8, 2024), https://www.fws.gov/sites/default/files/documents/2024-04/interim-consultation-framework_8apr24.pdf.

Any major Federal action that "will or *may*" have a significant effect on the quality of the human environment requires preparation of an EIS.[55] To be sure, if the need for an EIS is unclear, an agency may first prepare an EA—as the Forest Service did here. But if the evidence before the agency is inadequate to conclude that a major federal action will *not* have a significant effect on the environment, the agency *must* prepare an EIS.[56] 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."[57]

Here, the limited analysis the Forest Service conducted confirms the need for an EIS. Several additional issues the Forest Service failed to adequately analyze—including impacts to VMTs—hammer this conclusion home. So does an application of the Council on Environmental Quality's ("CEQ") 1978 significance factors.

For decades, agencies assessed the need for an EIS by considering ten "intensity" factors in the appropriate context.[58] However, CEQ weakened its NEPA regulations by eliminating those factors in an unlawful rulemaking.[59] CEQ's regulations now simply call on agencies to "analyze the potentially affected environment and degree of the effects of the action" when determining the need for an EIS.[60] The current rule, however, is under challenge in several cases across the country. In addition to those cases, CEQ is also working to replace the rule with a more protective one. The current rule will almost certainly be stricken from the books during the life of this Project. So, if the Forest Service fails to meet the higher standard of the 1978 rule, it puts this Project at risk.

In other words, if the agency hopes to avoid the need to prepare a supplemental EIS later on when NEPA's safeguards are restored, it must ensure that the Project does not cross the line drawn by the 1978 significance factors. Doing so will require additional analysis, mitigation commitments, and project changes as described throughout these comments.

A brief review of the 1978 significance factors confirms the need for an EIS. For example, one factor addresses the "[u]nique 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."[61] As explained above, the Project area contains several unique characteristics, including two VMTs and a Conservation Site of "outstanding significance."[62] This factor undoubtedly weighs in favor of a significance finding.

Another factor addresses the "degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks."[63] Here, the impacts of many features of the Project are unknown because the agency has not completed its analyses of these features. Therefore, this factor too suggests the Project is significant.

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[55] 42 U.S.C. § 4332(C); 40 C.F.R. § 1508.1(b) (2020) (emphasis added).
[56] *See* 40 C.F.R. § 1508.1(b) (2020).
[57] *Save the Yaak Comm. v. Block*, 840 F.2d 714, 717 (9th Cir. 1988) (internal citations omitted).
[58] *See* 40 C.F.R. § 1508.27 (2019).
[59] CEQ, Final NEPA Rule, 85 Fed. Reg. 43,304, 43,322 (July 16, 2020).
[60] 40 C.F.R. § 1501.3(b) (2020).
[61] 40 C.F.R. § 1508.27(b)(3) (2019).
[62] *See* Nicki Gustafson, Virginia Dep't of Conservation and Recreation's Division of Natural Heritage comments on Draft EA 1 (Apr. 24, 2024).
[63] *Id.* § 1508.27(b)(5) (2019).

Finally, yet another factor considers whether "the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment."[64] As explained above, the Project threatens to violate NEPA, NFMA, the Clean Water Act, the Forest Plan, Forest Service regulations, and Virginia water-quality standards. It also may run afoul of Executive Order 13,751, which establishes "[i]t is the policy of the United States to prevent the introduction, establishment, and spread of invasive species."[65] In addition, unless the Forest Service adjusts its analysis of the Northern long-eared bat and confirms its consultation with the Fish and Wildlife Service on other federally-endangered species that remain unnamed in the Draft EA despite being raised by commenters, it may violate the Endangered Species Act. This factor unquestionably supports the need for an EIS.

Although this is not an exhaustive application of all ten factors, even this brief survey confirms that the Project is likely to have significant or potentially significant impacts.

IV. Conclusion

The Forest Service's Draft EA fails to adequately assess the impacts of the Dunlap Creek Vegetation Management Project in contravention of NEPA. Further, it fails to adequately disclose information necessary for the public to meaningfully comment on the Draft EA as released. The agency must revise the Draft EA to correct the deficiencies detailed above before resubmitting a NEPA document for public comment. Without significant changes, the Project as proposed may require preparation of an EIS.

Thank you for consideration of this letter. Please contact Kristin Davis or Katherine Coffey if you have any questions regarding these comments.

Sincerely,

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[64] *Id.* § 1508.27(b)(10) (2019).
[65] Executive Order 13,751, 81 Fed. Reg. 88,609 (Dec. 5, 2016).