

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
ASHEVILLE DIVISION**

MOUNTAINTRUE, SIERRA CLUB,)
CENTER FOR BIOLOGICAL DIVERSITY,)
and DEFENDERS OF WILDLIFE,)

Plaintiffs,)

v.)

UNITED STATES FOREST SERVICE and)
FOREST SUPERVISOR JAMES)
MELONAS,)

Defendants.)

Civil Case No. 1:25-cv-91

COMPLAINT

INTRODUCTION

1. This case challenges the U.S. Forest Service’s 2023 revised land and resource management plan for the Nantahala and Pisgah National Forests. That plan and its accompanying environmental analysis are arbitrary, capricious, and not in accordance with law, in violation of the National Environmental Policy Act, 42 U.S.C. § 4332, the National Forest Management Act, 16 U.S.C. § 1604, and the Administrative Procedure Act, 5 U.S.C. § 706(2)(A).

2. The Nantahala and Pisgah National Forests (“the Forests”) are two of the most biologically diverse, scenic, and frequently visited national forests in the United States. The two forests—managed as a single unit—span a little over one million acres in western North Carolina.

3. Like all national forests, Congress has instructed that the Nantahala and Pisgah be managed for “multiple use,” which includes outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness.

4. To implement multiple uses across the landscape, each national forest is governed by a land and resource management plan, also called a “forest plan.” These forest plans set goals and objectives for what will happen on a national forest over the life of the forest plan and divide forests into “management areas”—similar to city or county zoning ordinances—with specific actions allowed or prohibited in each management area. Individual “projects” then implement the forest plan in specific places over time.

5. Forest plans are often in place for twenty years or more. As a result, the decisions made in forest plans are critically important to the management of that forest for a generation.

6. Forest plans are developed and revised under two statutes relevant here—the National Forest Management Act (“NFMA”) and the National Environmental Policy Act (“NEPA”)—and their implementing regulations. The former requires that forest plans maintain and restore “ecological integrity.” The latter requires the Forest Service to assess and disclose its forest plans’ environmental consequences.

7. In 2023, the Forest Service finalized a new forest plan for the Forests (the “2023 Forest Plan”). The Forest Service’s primary goal in the planning process was to increase levels of young forests created through logging, which the Forest Service calls “early successional habitat.” To that end, the agency increased by 81,000 acres the area of the Forests designated as “suitable” for timber production and set objectives to quintuple current annual logging levels. In addition, the Forest Service increased objectives to “thin” forests—a type of logging lighter than that used to create early successional habitat—by ten times current levels. Put simply, under the 2023 Forest Plan, more logging will occur in more areas of the Forests.

8. Throughout the forest plan revision process, MountainTrue, Sierra Club, Center for Biological Diversity, and Defenders of Wildlife (“Conservation Groups”) explained that the

proposed levels of logging are not warranted for the sole purpose of creating early successional habitat, and that logging must be accompanied by requirements to protect the unique values that it would harm, including backcountry areas, old-growth forests, water quality, rare species, and exemplary habitats. Those requirements are necessary to ensure that other national forest “multiple uses”—like recreation, wildlife, wilderness, and watershed—are not degraded in the pursuit of timber production. Over ten thousand members of the public spoke up for similar protections.

9. Unfortunately, instead of grappling with those issues, the Forest Service took procedural shortcuts, failed to disclose information to the public about the adverse effects of the 2023 Forest Plan, and made numerous legal and analytical errors to justify its significantly increased logging levels. In short, the Forest Service emphasized the benefits of logging while ignoring or downplaying its adverse effects and risks. These errors violate the procedural requirements of NEPA and led to procedural and substantive NFMA violations.

10. The 2023 Forest Plan’s objectives for logging will cause a harmful imbalance in the abundance of habitat for disturbance-sensitive animals and plants like the endangered northern long-eared bat and Carolina northern flying squirrel, among many others. In addition, because of the expanded footprint of logging, harmful impacts will occur in more portions of the forest that are currently intact and have rare or exemplary conservation values. Finally, because the 2023 Forest Plan sets the wrong objectives, every project will be a missed opportunity to restore ecological integrity. Preventing these harms is at the center of Conservation Groups’ missions.

11. These flaws were problematic from the outset, but there is increased urgency to address them for three reasons. First, the Forest Service has begun implementing the 2023 Forest

Plan in earnest through site-specific projects such as the Southside Project, logged in 2024 just before Hurricane Helene, and the upcoming Nantahala Mountains Project. These projects are intended to implement the flawed objectives in the 2023 Forest Plan, and they rely on that plan's analysis to justify their existence. They will also be implemented without needed protections, as discussed more below. The agency has not—and says it will not—revisit the analytical and substantive errors challenged here when developing and implementing individual projects. The harms flowing from the flawed forest plan will continue unless the 2023 Forest Plan itself is corrected.

12. Second, the Forest Service's purported need to create early successional habitat through dramatic increases in logging, arbitrary and capricious from the outset, has now been proven untrue. When developing the 2023 Forest Plan, the Forest Service concluded it must expand logging because early successional habitat is not being created at sufficient levels through natural disturbances like tree blowdown from wind events and wildfires. Specifically, the Forest Service assumed that early successional habitat would only be created naturally at an anemic 181 acres annually across the million-acre Forests. That assumption—which was always wrong—was upended by Hurricane Helene, which devastated western North Carolina in September 2024. By the agency's own estimates, the storm's fierce winds and flooding damaged or destroyed vegetation on approximately 117,000 acres across the Forests. By felling so many trees, the storm created tens of thousands of acres of early successional habitat on the Forests, obviating the need to create high levels of that same habitat via commercial logging. Conservation Groups have asked the Forest Service to reconsider its logging levels in light of the now abundant amount of early successional habitat on the landscape, but the agency has declined to respond.

13. Third, the President recently issued an Executive Order seeking to increase logging on national forest system lands and reduce opportunities for public comment and participation in logging decisions. *See* Executive Order 14,225 (March 6, 2025). Indeed, the Pisgah National Forest has already prepared at least 15 timber sales spanning 2,153 acres, including several sensitive and unique areas, that do not involve public comment periods or pre-decisional environmental review. This leaves the public without the ability to mitigate the harm from the 2023 Forest Plan by calling for improvements to individual projects.

14. To protect their interests, Conservation Groups ask this Court to vacate the 2023 Forest Plan and remand it to the Forest Service for further proceedings.

JURISDICTION AND VENUE

15. This action arises under the laws of the United States including the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*, National Forest Management Act, 16 U.S.C. §§ 1600 *et seq.*, and Administrative Procedure Act (“APA”), 5 U.S.C. §§ 701–06. This Court has jurisdiction over this action pursuant to 28 U.S.C. § 1331 (federal question jurisdiction), 28 U.S.C. § 1346(a)(2) (United States as defendant), and 5 U.S.C. § 702 (APA judicial review). This Court may issue a declaratory judgment and further relief requested pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201–2202.

16. The Final Environmental Impact Statement, Record of Decision, and 2023 Forest Plan challenged here are final agency actions within the meaning of the APA and accordingly are judicially reviewable under 5 U.S.C. § 704.

17. Venue is proper in this District under 28 U.S.C. § 1391(e)(1)(B) because Defendants are agencies, officers, or employees of the United States acting in their official capacities, and a substantial part of the events or omissions giving rise to the claims occurred in

the District. Venue is also proper in this District under 28 U.S.C. § 1391(e)(1)(C) because Defendants are agencies, officers, or employees of the United States acting in their official capacities, no real property is involved in this action, and Plaintiff MountainTrue is headquartered in the District.

PARTIES

Plaintiffs

18. Conservation Groups are dedicated to protecting the Southeast's national forests. Each organization's core mission centers on advocating for the sound and lawful management of public lands, including national forest lands.

19. Conservation Groups robustly engage in the Forest Service's management processes for the Forests to achieve their organizational aims. Specifically, Conservation Groups engage in both the forest planning process—the process which culminated in the 2023 Forest Plan—as well as in individual project-level decisions which occur under a forest plan's overarching blueprint. This two-tiered engagement—plan-level engagement and project-level engagement—is a central part of each organization's work.

20. For the Forests in particular, Conservation Groups engaged in good faith for many years in the plan-level processes that ultimately resulted in the 2023 Forest Plan. Through that process, they advocated for a forest plan that would protect water quality, old growth, wildlife habitat, and cultural and recreational resources, among other values important to their missions. Despite their consistent engagement in the planning process, the 2023 Forest Plan fails to protect Conservation Groups' interests.

MountainTrue

21. MountainTrue is a nonprofit corporation with its principal office in Asheville, North Carolina, and smaller offices in Saluda, Boone, and Murphy, North Carolina.

MountainTrue was founded in 1982 to protect the national forests surrounding Asheville from abusive logging practices by the Forest Service. Today, MountainTrue champions clean water, resilient forests, and healthy communities in the Southern Blue Ridge Mountains. Its core mission remains focused on protecting the Pisgah, Nantahala, and Cherokee National Forests (the Cherokee is in Tennessee). MountainTrue achieves this mission, in large part, through engagement with all levels of Forest Service decision-making. The forest planning process has implications for MountainTrue's mission for long periods of time, so MountainTrue places special emphasis on it.

22. Specifically, MountainTrue works to protect a number of resources that are present on the Forests, including old-growth forests, rare and native plants and animals and their habitats, large unroaded areas, clean water, and opportunities for recreation. MountainTrue has been involved for decades in every notable timber sale project and any other management proposal or permit that has risked adversely affecting the Forests, their natural resources, and/or the ability of members of the public to enjoy those resources unimpaired.

23. MountainTrue has 23 staff members, over 2,000 members, and 12,000 supporters, primarily in North Carolina. Many of these members and staff live near the Forests. Some of these members run or patronize businesses or conduct scientific research that depends on healthy, vibrant, and biodiverse national forest lands nearby. Many members regularly visit the Forests to hike, fish, kayak, whitewater raft, camp, bird watch, trail run, mountain bike, research, take photographs, go on scenic drives, experience Wilderness, and observe rare and threatened species.

24. For example, MountainTrue member Josh Kelly visits the Forests for both professional and personal reasons. He enjoys fishing, hiking, bicycling, swimming, hunting,

foraging, and nature study in the Forests. He has visited hundreds of peaks, streams, ridges, coves, and slopes within the Forests by road, trail, and cross-country travel, and he intends to continue to do so for as long as he is able.

25. The 2023 Forest Plan directly harms many of these interests and the special places in the Forests that facilitate these experiences. For example, the 2023 Forest Plan opens sensitive biological areas to logging and proposes a dramatic increase in the amount of logging that will occur on the Forests. By failing to include project-level requirements to restore ecological integrity, the 2023 Forest Plan also frustrates MountainTrue's longstanding efforts to ensure logging contributes to ecological restoration rather than degradation. These effects will—and indeed have already begun to—destroy areas of the Forests which are beloved by MountainTrue members and staff. MountainTrue members like Mr. Kelly are deeply affected by logging and its associated impacts on water quality and wildlife.

26. During the planning process, MountainTrue invested approximately 5,000 hours of staff time in collaborative efforts alone, which cost a significant portion of MountainTrue's budget. This included time spent participating in a diverse group of conservation, wildlife, industry, and recreation stakeholders known as the Nantahala–Pisgah Forest Partnership. This Partnership succeeded in agreeing on, among other things, which special areas on the Forests should be protected because they were home to sensitive species or were otherwise of especially high ecological, cultural, and/or scenic value. Separately and as part of the Partnership, MountainTrue submitted timely comments, communicated with agency staff, and formally objected to the forest plan. The 2023 Forest Plan did not accept the Partnership's consensus

recommendations for protections needed to ensure that higher logging levels do not degrade the Forests' rare and unique values.

27. The 2023 Forest Plan causes harm to MountainTrue's mission itself by degrading the natural resources and forests it is dedicated to protecting. These interests will continue to be adversely affected and irreparably injured if the Forest Service is allowed to continue implementing the 2023 Forest Plan as approved.

28. MountainTrue has exhausted all administrative remedies in connection with the 2023 Forest Plan. The actual or imminent, concrete, and particularized injuries to MountainTrue and its members and staff would be redressed by an order from this Court vacating the 2023 Forest Plan and remanding to the Forest Service.

Sierra Club

29. Sierra Club is a nonprofit, grassroots organization founded in 1892 to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. Sierra Club has a long history of advocating for protected public lands, and land conservation is an integral part of its work.

30. Sierra Club has over 600,000 current members across 60 chapters, including an especially active North Carolina Sierra Club chapter that includes more than 40,000 members and supporters. In keeping with Sierra Club's core principles, the North Carolina chapter is dedicated to protecting public lands. Specifically, it works to protect these natural oases for rare and endangered species, to safeguard upstream sources of clean water, and ensure that all

citizens have the opportunity to explore and enjoy nature. In western North Carolina in particular, the Chapter is deeply engaged on wilderness, logging, and species issues.

31. Many of the North Carolina chapter's members live near and regularly visit the Forests or patronize businesses that depend on healthy, vibrant, and biodiverse national forest lands nearby. These members regularly enter the Forests to hike, camp, bird watch, run, ride bicycles, conduct research, take photographs, enjoy scenic drives, fish, kayak, whitewater raft, and observe rare and threatened species.

32. For example, Sierra Club member David Reid enjoys being in the Forests to restore his spirit, and likes visiting Table Rock and Looking Glass Rock in particular. While in the Forests, Mr. Reid enjoys visiting and viewing all kinds of habitats, scenic vistas, wildflowers, and waterfalls.

33. Sierra Club, through its western North Carolina Group (which is part of the North Carolina chapter), has participated in the management of the Forests for decades and is active in administrative and decision-making processes on the Forests.

34. Sierra Club invested significant resources and effort into advocacy surrounding the Nantahala–Pisgah forest planning process. Specifically, Sierra Club submitted extensive comments on the draft and final revised forest plan for the Forests. Sierra Club also participated in both the Nantahala–Pisgah Forest Partnership and a Forest Service–convened stakeholders' group. Sierra Club filed a formal objection to the forest plan and Sierra Club members, including Mr. Reid, participated in objection meetings with the Forest Service.

35. The 2023 Forest Plan fails to protect the interests that Sierra Club advanced through these various levels of engagement. For one, the 2023 Forest Plan does not sufficiently protect the unique ecological values found on the Forests that are important to Sierra Club

members. Further, the 2023 Forest Plan opens areas to roadbuilding and timber harvest that have qualities and values that are important to Sierra Club members. Harm to these areas also causes harm to the organization's mission itself by degrading wilderness characteristics and diminishing myriad natural resources. These interests will continue to be adversely affected and irreparably injured if the Forest Service is allowed to continue implementing the 2023 Forest Plan as approved.

36. Sierra Club has exhausted all administrative remedies in connection with the 2023 Forest Plan. The actual or imminent, concrete, and particularized injuries to Sierra Club and its members and staff would be redressed by an order from this Court vacating the 2023 Forest Plan and remanding to the Forest Service.

Center for Biological Diversity

37. The Center for Biological Diversity ("the Center") is a national nonprofit organization with its Southeast Program headquarters in Asheville, North Carolina. The Center was founded in 1989 with the belief that the welfare of human beings is deeply linked to nature, and specifically to the existence of a vast diversity of wild animals and plants. The Center's mission is to work to secure a future for all species, great and small, hovering on the brink of extinction by use of science, law, and creative media, with a central focus on protecting the lands, waters, and climate that species need to survive. The Center's mission is driven by a desire to preserve these resources both for their inherent value and for their value to future generations.

38. In the Southeast, lawful and responsible stewardship of national forest lands is a fundamental priority for the Center. Accordingly, the Center regularly and robustly engages in Forest Service management processes. A significant part of the Center's work in the Southeast focuses on ensuring that the Forest Service is meeting NFMA's substantive and procedural requirements, which, among other things, require that forest plans provide for the restoration or

maintenance of ecological integrity, and NEPA's requirements that the agency exercise informed decision-making and transparently inform the public about the plan's risks.

39. The Center has more than 1.7 million members and active campaign participants across the United States, including more than 36,000 members and active supporters in North Carolina. The Center's members and staff derive scientific, aesthetic, recreational, and spiritual benefits from the existence of the natural features of the Forests and the wildlife species that depend on them. Many of these members enjoy recreating in the Forests, where they hike, camp, bird watch, run, ride bicycles, take photographs, enjoy scenic drives, conduct scientific research, fish, kayak, whitewater raft, and observe rare and threatened species and other wildlife. Many of these members patronize businesses that depend on healthy, vibrant, and biodiverse national forest lands nearby.

40. For example, Will Harlan, a member of the Center, has long had a meaningful relationship with the Forests. He is a dedicated trail runner and enjoys the Big Ivy area in the Pisgah National Forest in particular. Mr. Harlan, like other members of the Center, also visits the Forests to survey for salamanders, including rare green salamanders, and other species of wildlife.

41. These interests are threatened by the 2023 Forest Plan's expansion of logging operations and failure to provide meaningfully protective standards that would avoid or minimize harm to biological and recreational hot spots which members of the Center enjoy visiting. Restated, the interests of the Center's members, including Mr. Harlan, have been and will be adversely affected and irreparably injured if the Forest Service is allowed to continue implementing the 2023 Forest Plan as approved.

42. Because of their passion for the Forests, Center members and supporters submitted more than 14,000 administrative objections to the 2023 Forest Plan, and they participated in a rally for stronger species protections in the 2023 Forest Plan that attracted more than 400 participants.

43. The Center also submitted comments during the forest planning process and formally objected to the 2023 Forest Plan.

44. Through its involvement, the Center urged the Forest Service to ensure the region's most unique and important habitats would be excluded from logging projects. The Center specifically asked that the Forest Service place the most important of these areas in protected management areas where timber production would be minimized or prohibited. The 2023 Forest Plan protected far fewer of these important habitats than the Center had advocated for. This failure leaves places and habitats that are central to the Center's mission without adequate protection.

45. The Center has exhausted all administrative remedies in connection with the 2023 Forest Plan. The actual or imminent, concrete, and particularized injuries to the Center and its members and staff would be redressed by an order from this Court vacating the 2023 Forest Plan and remanding to the Forest Service.

Defenders of Wildlife

46. Plaintiff Defenders of Wildlife ("Defenders") is a national nonprofit organization headquartered in Washington, D.C.

47. Defenders' organizational mission includes the protection of native plants and animals, natural habitats, and the communities that they support. Defenders accomplishes its goals by promoting on-the-ground conservation initiatives; funding science-based research; developing ecologically sound policy; advocating on the local, state, and national levels; and

litigating when necessary. Specifically, Defenders advocates for a scientifically sound approach to wildlife conservation that is geared toward restoring imperiled species and the habitats they depend on as well as preventing other species from becoming threatened or endangered.

Landscape-scale habitat conservation plays a central role in these efforts.

48. Defenders has a specific interest in the conservation and protection of federal lands, including national forests. National forests and other public lands represent a network of habitat vital to the recovery of imperiled wildlife in the Southeast and throughout the country. Accordingly, Defenders regularly engages in the public participation process required by NEPA for agency activities ranging from broad land management planning decisions, which affect large swaths of wildlife habitat, to specific actions in discrete places with effects on individual specimens. The forest planning process is especially important to Defenders because it determines long-term outcomes and cumulative impacts for species habitat, viability, and recovery.

49. The Forests, in particular, are a special priority for Defenders because they comprise some of the most biodiverse lands and waterways in the United States. Species that Defenders prioritizes on the Forests include the green salamander, Eastern hellbender salamander, and cerulean warbler, and federally protected species like the Carolina northern flying squirrel, spruce-fir moss spider, Appalachian elktoe mussel, Indiana bat, and northern long-eared bat—species that are harmed by the disturbance and sedimentation from logging.

50. Defenders has more than two million members and activists nationwide, including members in all fifty states and 9,424 members and donors in North Carolina. Many North Carolina members recreate in the Forests, where they enjoy fishing, hunting, birding,

hiking, mountain biking, trail running, kayaking, rafting, camping, scenic driving, studying nature, learning outdoor skills, and observing or searching for rare and listed species.

51. Defenders' members and staff, including Ben Prater, enjoy hiking on the Appalachian Trail, the Art Loeb Trail, the Mountains to Sea Trail and exploring trails along the Blue Ridge Parkway within places like the Cradle of Forestry, the Pink Beds, and the Black Balsams. Mr. Prater enjoys fishing and wildlife viewing along rivers within the Forests such as the Davidson and Tuckasegee. In the spring, he visits specific locations in the Forests to enjoy bird watching, including Big Ivy, Shope Creek, and areas along the Blue Ridge Parkway. Specifically, Mr. Prater enjoys visiting these parts of the Forests with his family and traveling to places in the Forests in each season to enjoy the plants and animals that live there. He plans to continue doing so in the future.

52. In sum, Defenders' members and staff derive scientific, aesthetic, recreational, and spiritual benefit from the existence of the natural features of the Forests and the wildlife species that depend on them. These interests are and will continue to be adversely affected and irreparably injured if the Forest Service is allowed to continue implementing the 2023 Forest Plan as approved.

53. Because of these interests, Defenders participated heavily in the Nantahala–Pisgah forest plan revision process by submitting comments and a formal objection, working with other stakeholders, and communicating with agency staff.

54. For example, during the planning process, Defenders participated as a member of the Nantahala–Pisgah Forest Partnership. The protections Defenders advocated for, many of

which were ultimately supported by consensus in the Partnership, included placing such areas in protective management areas where logging activities are more restricted.

55. The 2023 Forest Plan failed to adopt many of Defenders' and the Nantahala–Pisgah Forest Partnership's recommendations. This is significant to Defenders because the objectives for logging will cause an imbalance in habitat abundance to the detriment of disturbance-sensitive species; the locations of logging will be more likely to affect intact portions of the forest that are most important to those species; and every project will be a missed opportunity to expand and improve habitat for those species. These impacts undermine Defenders' mission.

56. Defenders has exhausted all administrative remedies in connection with the 2023 Forest Plan. The actual or imminent, concrete, and particularized injuries to Defenders and its members and staff would be redressed by an order from this Court vacating the 2023 Forest Plan and remanding to the Forest Service.

Defendants

United States Forest Service

57. Defendant United States Forest Service is a federal agency within the United States Department of Agriculture. The Forest Service is charged with stewarding the 1.1 million acres in the Nantahala and Pisgah National Forests in North Carolina.

58. The Forest Service promulgated the 2023 Forest Plan and issued the Final Environmental Impact Statement and Record of Decision. The Forest Service is responsible for ensuring that those actions comply with the NFMA, NEPA, the APA and their implementing regulations.

Forest Supervisor James Melonas

59. Defendant James Melonas is the Forest Supervisor for the Forest Service's National Forests in North Carolina administrative unit which includes the Nantahala and Pisgah National Forests. While the Nantahala and Pisgah National Forests are technically two separate Forests, they are combined for purposes of forest planning, and the 2023 Forest Plan applies to both. Mr. Melonas is sued in his official capacity.

60. Mr. Melonas is the responsible official who signed the Record of Decision for the 2023 Forest Plan.

LEGAL BACKGROUND

The National Forest Management Act

61. Since 1960, national forests have been managed pursuant to a "multiple use" mandate. *See* Multiple-Use Sustained-Yield Act of 1960, Pub. L. No. 86-517, 74 Stat. 215 (1960). Those "multiple uses" include outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. 16 U.S.C. §§ 528, 529, 1604(e).

62. Congress passed the National Forest Management Act in 1976 to help balance and achieve these multiple uses across the national forest system. *See* Pub. L. No. 94-588, 90 Stat. 2949 (1976).

63. To that end, NFMA requires the Forest Service to "develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System." 16 U.S.C. § 1604(a). These "forest plans" must be revised when the agency "finds conditions in a unit have significantly changed, but at least every fifteen years." *See* 16 U.S.C. § 1604(f)(5).

64. In practice, forest plans tend to last much longer than fifteen years, often directing forest management for a generation or more. *See, e.g.*, Pub. L. No. 117-328, div. G, title IV, § 407 (2022), 136 Stat. 4821 (codified at 16 U.S.C. § 1604 note) (excusing violations of

the fifteen-year deadline so long as the agency is “acting expeditiously and in good faith, within the funding” available to revise outdated forest plans). The previous forest plan for the Forests, for example, was adopted in 1987, with one significant amendment in 1994.

65. Forest plans “provide a framework for where and how certain activities can occur in national forests.” *Sierra Club, Inc. v. U.S. Forest Serv.*, 897 F.3d 582, 600 (4th Cir. 2018). They do this in two primary ways.

66. First, forest plans direct the course of activity on a national forest over the life of the forest plan. In forest planning terminology, this is achieved by establishing “desired conditions,” which are “description[s] of specific social, economic, and/or ecological characteristics . . . toward which management of the land and resources should be directed,” 36 C.F.R. § 219.7(e)(1)(i), and “objectives” which are “concise, measurable, and time-specific statement[s] of a desired rate of progress toward a desired condition or conditions.” *Id.* § 219.7(e)(1)(ii). In combination, the Forest Service establishes desired conditions and sets objectives for achieving them; subsequent Forest Service “projects” implement these objectives. *Id.* § 219.7(e).

67. Second, forest plans divide national forests into different zones similar to city or county zoning where specific activities are encouraged, prohibited, or limited in each zone. These zones are called “management areas,” *id.* §§ 219.7(d), 219.19, and projects in each management area are bound by forest plan “standards” and “guidelines.” A “standard” is a “mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirement;” a “guideline” is also a constraint on future projects, but it “allows

for departure from its terms, so long as the purpose of the guideline is met.” *Id.* § 219.7(e)(1)(iii), (iv).

68. Forest plans are also subject to additional requirements related to timber harvest. Each management area is identified as being either suitable or unsuitable for “timber production.” 16 U.S.C. § 1604(k). Timber production is “[t]he purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use.” 36 C.F.R. § 219.19. The Forest Service cannot identify land as suitable for timber production unless it intends to conduct scheduled timber harvest on an ongoing basis. Forest Service Handbook (“FSH”) 1909.12.61.2. The determination about whether an area is “suitable” or “unsuitable” for timber production is included as a “standard” for each “management area.”

69. To the extent logging is anticipated under a forest plan, the agency must describe how much logging and what kinds of logging—the “harvesting levels” and the “proportion of probable methods of timber harvest.” 16 U.S.C. § 1604(e)(2), (f)(2). Harvesting levels must be less than or equal to the “quantity which can be removed . . . annually in perpetuity on a sustained-yield basis,” though the Forest Service can plan to harvest more in the short term than it can harvest in the long term by publicly vetting a “planned departure” from this limit. *Id.* § 1611(a).

70. In combination, forest plans “[set] logging goals, [select] the areas of the forest that are suited to timber production, and [determine] which probable methods of timber harvest are appropriate.” *Ohio Forestry Ass’n, Inc. v. Sierra Club*, 523 U.S. 726, 729 (1998) (citing 16 U.S.C. § 1604(k), (f)(2)).

71. After a plan is finalized, any activity that occurs on a national forest “shall be consistent” with the governing forest plan. 16 U.S.C. § 1604(i). In this way, forest plans “guide all natural resource management activities within the national forests.” *Wild Virginia v. U.S. Forest Serv.*, 24 F.4th 915, 921 (4th Cir. 2022) (citing *Ohio Forestry Ass’n*, 523 U.S. at 729).

72. The Forest Service has promulgated regulations to guide the process of developing, revising, and amending forest plans. These regulations are referred to as “planning rules,” and “essentially [lay] out a series of steps for developing individual [forest plans].” *Fed. Forest Res. Coal. v. Vilsack*, 100 F. Supp. 3d 21, 27 (D.D.C. 2015).

73. The 2023 Forest Plan utilized a planning rule promulgated in 2012. *See* U.S. Forest Serv., National Forest System Land Management Planning, 77 Fed. Reg. 21,162 (Apr. 9, 2012) (the “2012 Planning Rule”). The 2012 Planning Rule contained an entirely new emphasis as compared to the previous Planning Rule promulgated in 1982 (the “1982 Planning Rule”). Where the 1982 Planning Rule emphasized economic efficiency in logging operations, the 2012 Planning Rule emphasizes ecological sustainability. *Compare* 36 C.F.R. § 219.1(b)(13) (1982), *with* 36 C.F.R. § 219.1(c) (2012).

74. “In order to satisfy the requirements of the 2012 Planning Rule, each forest plan must not only have been developed pursuant to certain procedural steps, it must also include certain substantive elements.” *Fed. Forest Res. Coal.*, 100 F. Supp. 3d at 30 (citations omitted).

75. The 2012 Planning Rule creates a hierarchical process for revising forest plans. This process occurs in four primary steps.

76. As a first step, forest plans must provide for ecological integrity. This requirement is the foundation of the 2012 Planning Rule. 36 C.F.R. § 219.1(c). Specifically, forest plans must contain “standards or guidelines” to “maintain or restore the ecological integrity of terrestrial and

aquatic ecosystems and watersheds in the plan area.” *Id.* §§ 219.8(a)(1); 219.9(a)(1). In other words, in addition to any broad desired conditions or objectives for restoration goals, the agency must also adopt plan components that function as “constraint[s] on project and activity decisionmaking” to restore ecological integrity. *Id.* § 219.7(e)(1)(iii), (iv).

77. “Ecological integrity” is defined as the “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.” *Id.* § 219.19. The “natural range of variation” is the “variation of ecological characteristics and processes” based on “dominant natural disturbance regimes such as fire and flooding” during a “pre-European influenced reference period.” U.S. Forest Serv., *Forest Service Handbook*, 1909.12.0.5 (hereinafter “FSH”).

78. In short, the 2012 Planning Rule requires maintenance of ecological integrity where it currently exists and restoration where it does not. *See* U.S. Forest Serv., *Final Programmatic Environmental Impact Statement for 2012 Planning Rule* at 105 (2012) (explaining that the Rule “clearly and explicitly focuses on maintaining desired ecological conditions where they currently exist and restoring ecological conditions that have been degraded, damaged, or destroyed”).

79. In these contexts, “maintain” means “keep in existence or continuance of the desired ecological condition in terms of its desired composition, structure, and processes.” 36 C.F.R. § 219.19. “Restore” means to “assist[] the recovery of an ecosystem that has been degraded, damaged, or destroyed. Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and

aquatic ecosystems sustainability, resilience, and health under current and future conditions.” *Id.* Composition, structure, and ecological processes are further defined in the 2012 Planning Rule. *See id.* The term “pattern” refers to the “type, frequency, intensity, and spatial scale” of disturbances. U.S. Forest Serv., *Nantahala and Pisgah National Forest Final Land Management Plan Final Environmental Impact Statement* at 3-420 (2023) [hereinafter “FEIS”].

80. As part of the same ecological sustainability requirement, the 2012 Planning Rule also requires forest plans to include project-level constraints to “maintain or restore” “soils and soil productivity,” “water quality,” “the ecological integrity of riparian areas,” 36 C.F.R. § 219.8, and “the diversity of ecosystems and habitat types throughout the plan area,” *id.* § 219.9(a)(2). *See also Wild Virginia*, 24 F.4th at 921 (“The 2012 Planning Rule imposes substantive requirements for sustainability, diversity of plant and animal communities, multiple land uses, and timbering that are intended to maintain or restore ecological integrity and ecosystem diversity in national forests while preserving those forests for multiple uses.”).

81. Maintaining or restoring ecological integrity is required for its own sake, 36 C.F.R. § 219.8(a), and separately “to provide the ecological conditions to both maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area,” *id.* § 219.9.

82. As a second step, the Forest Service must determine whether additional protections are needed for rare species. To the extent possible within Forest Service authority and the “inherent capability” of the land, forest plans must include standards or guidelines as constraints on future projects to protect rare species, if “not otherwise protected by” the plan components providing for the maintenance or restoration of ecological integrity. *Id.* § 219.9. Together, these project-level constraints (both those intended to maintain or restore ecological

integrity and any additional constraints adopted at this second step) must “contribute to the recovery of” species listed under the Endangered Species Act and “maintain a viable population of each species of conservation concern within the plan area.” *Id.* § 219.9(b).

83. As a third step, forest plans developed under the 2012 Planning Rule must also provide for other multiple uses, including timber harvest for “integrated resource management,” but only to the extent consistent with the maintenance or restoration of ecological integrity and protection of rare species. *See id.* § 219.10 (providing for multiple-use management “[w]hile meeting the requirements” related to ecological integrity and biological diversity).

84. Fourth and finally, forest plans must address whether and where timber production and timber harvest for other reasons will occur. *Id.* § 219.11(a), (b). Forest plan components for logging must also be consistent with the previous requirements to maintain or restore ecological integrity, protect rare species, and provide for multiple uses. *Id.* § 219.11 (providing for timber management “[w]hile meeting the requirements” of the earlier steps in the process).

85. Four other overarching requirements under the 2012 Planning Rule are particularly relevant here. First, the 2012 Planning Rule requires that the agency use the “best available scientific information to inform the planning process.” *Id.* § 219.3.

86. Second, the 2012 Planning Rule requires forest plans to be within the “fiscal capability of the unit.” *Id.* § 219.1(g). In other words, the Forest Service may not set desired conditions and objectives that are outside its fiscal capability, which the agency says must be identified based on “a trend analysis of the recent past budget obligations for the unit (3 to 5 years).” FSH 1909.12.22.12 (2015).

87. Third, forest plan components must be “integrated,” 16 U.S.C. § 1604; 36 C.F.R. § 219.1(b), which “means that all plan components work together toward achieving or maintaining desired conditions.” FSH 1909.12.22 (2015). In other words, “[o]ne plan component must not directly conflict with another plan component or prevent its accomplishment. *Id.*

88. Fourth, the 2012 Planning Rule requires consideration of the “context of the broader landscape” when making planning decisions. 36 C.F.R. § 219.1(b). This orientation is referred to as the “all lands” perspective on planning, and it requires the Forest Service to “look beyond the unit boundary and develop an understanding of management issues on the plan area within the context of the broader landscape.” 77 Fed. Reg. at 21,185; *see also* FSH 1909.12.12.1 (requiring consideration of how federal lands can “contribute to the integrity of the broader ecological systems”).

The National Environmental Policy Act

89. Forest plan revision also requires compliance with NEPA. NEPA requires federal agencies to “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man” “to the fullest extent possible.” 42 U.S.C. §§ 4331, 4332. Specifically, NEPA requires that agencies both “consider every significant aspect of the environmental impact of a proposed action” and “inform the public that it has indeed considered environmental concerns in its decisionmaking process.” *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983).

90. NEPA achieves these twin aims through “procedural requirements that obligate federal agencies ‘to undertake analyses of the environmental impact of their proposals and actions.’” *Wild Virginia*, 24 F.4th at 920 (quoting *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 756–57 (2004)).

91. To satisfy NEPA's requirements, agencies must take "a 'hard look' at an action's environmental impacts." *Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 185 (4th Cir. 2005). "At the least," this "encompasses a thorough investigation into the environmental impacts of an agency's action and a candid acknowledgment of the risks that those impacts entail." *Id.* "[S]weeping negative evidence under the rug" or examining effects "in a cursory manner" does not constitute a "hard look." *Id.* at 194.

92. A "hard look" also requires accurate assessment and public disclosure of "baseline conditions" which are the starting point of an agency's environmental analysis. *See Or. Nat. Desert Ass'n v. Jewell*, 840 F.3d 562, 568-69 (9th Cir. 2016).

93. Here, the Forest Service was required to take a "hard look" at the 2023 Forest Plan's environmental impacts in an Environmental Impact Statement ("EIS"). *See* 36 C.F.R. § 219.5(a)(2)(i) ("A new plan or plan revision requires preparation of an environmental impact statement.").

94. EISs are prepared using "a systematic, interdisciplinary approach which ensure[s] the integrated use of the natural and social sciences." 42 U.S.C. § 4332(A). The resulting analysis must have "scientific integrity," "make use of reliable data and resources," and "utilize ecological information," among other requirements. *Id.* § 4332(D), (E), (K).

95. EISs must consider all "reasonably foreseeable environmental effects," including both "local short-term" effects and "long-term" effects, as well as "alternatives to the proposed agency action." *Id.* § 4332(C).

96. "NEPA also requires that agencies assess the cumulative impacts of their actions." *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1159 (9th Cir. 2006), *abrogated on other grounds by Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7 (2008); *see also Webb v. Gorsuch*,

699 F.2d 157, 161 (4th Cir. 1983) (recognizing that proper analysis under NEPA includes consideration of cumulative impacts).

97. Cumulative effects include other “past, present, and reasonably foreseeable actions” in the affected area. 36 C.F.R. § 220.4(f). Once the agency has identified these effects, it must assess “the extent that the effects of the proposal for agency action or its alternatives will add to, modify, or mitigate those effects.” *Id.*

Administrative Procedure Act

98. Review of both the forest planning process under the NFMA and environmental impact under NEPA occurs under the broad procedural umbrella of the APA. The APA creates a right to judicial review for plaintiffs wronged by federal agency action when there are no other adequate remedies available. Specifically, it requires courts to “set aside agency action” that is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.” 5 U.S.C. § 706(2).

99. Agency action is arbitrary and capricious where, among other things: the agency “entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise,” or where the agency’s action is not based on a “reasoned analysis.” *Motor Vehicle Mfrs. Ass’n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42–43 (1983).

100. Agency action is also arbitrary and capricious where an agency fails to adequately explain inconsistencies in its analysis. *Catawba Cnty. v. E.P.A.*, 571 F.3d 20, 51 (D.C. Cir. 2009) (“[I]nconsistent treatment is the hallmark of arbitrary agency action.”).

101. Ultimately, “the 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.”” *State Farm*, 463 U.S. at 43 (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)).

FACTUAL BACKGROUND

102. The Nantahala and Pisgah National Forests span a little more than one million acres in the mountains of western North Carolina. *See* FEIS at 3-23.

103. The Forests are globally significant reservoirs of biodiversity. The Forests’ rare and unique habitats shelter hundreds of rare species, including federally listed threatened and endangered species. *See* FEIS at 3-189 to 3-190. Many of the rare species occurring on the Forests are vulnerable to the effects of logging, including crushing by equipment, disturbance of habitat, and sedimentation of streams. FEIS at 3-338.

104. The Forests are important for recreation, scenery, and the local economy. They are among the most visited national forests in the country, and recreation is by far the most important economic activity associated with the Forests’ management. FEIS at 3-468, 3-613 to 3-616.

105. The Forests are also a source of timber. The Forest Service regularly undertakes timber projects where it identifies portions of the Forests to be logged and then sells the timber to private purchasers.

106. Since the Forest Service promulgated the first forest plan for the Forests in 1987, logging—specifically, how much logging, where it would occur, for what purposes, and by what methods—has been a contentious issue.

107. The primary form of logging on the Forests has been “regeneration” logging. Regeneration logging is logging that is intended to regenerate a new stand of trees by removing most of the existing trees in a stand (and a “stand” is a delineated group of trees with similar age,

size, and/or species characteristics). This effectively resets the age of the harvested stand to zero. For example, conducting regeneration harvesting in a 90-year-old forest stand resets that stand to age zero by removing most of the trees. This creates a structural condition often referred to as “early successional habitat.”

108. The Forest Service also uses a lighter type of commercial logging known as “thinning,” which can be used to create a structural condition often referred to as “open canopy” forest.

109. Under the previous forest plan, promulgated in 1994 (“1994 Forest Plan”), the Forest Service conducted regeneration harvest on 650 acres and thinning on an additional 150 acres annually. FEIS at xv.

110. Even at those relatively low levels of logging, the 1994 Forest Plan caused serious harms. Projects implementing the 1994 Forest Plan repeatedly proposed to log and build roads in areas of high conservation value, including unroaded areas, state-designated natural heritage natural areas, and old-growth forests. Logging in these areas and elsewhere caused degradation of species composition, resulting in stands with less diversity. Logging and associated roads in those projects also caused landslides and erosion and caused the spread of non-native invasive plants.

111. The Forest Service’s stated priority in developing the 2023 Forest Plan was to “emphasize the amount of young forest maintained through time.” FEIS App’x D at D-23. The Forest Service’s primary tool to achieve this priority was logging.

112. Compared to the 1994 Forest Plan, the 2023 Forest Plan significantly expands the geographic footprint of management areas suitable for timber production and dramatically

increases annual levels of logging. In general, more timber production requires a greater amount of “suitable” land.

113. There are two management areas in the 2023 Forest Plan which are dedicated to timber production. These management areas are called “Matrix” and “Interface.” The vast majority of logging will occur in these two management areas. The 2023 Forest Plan allocates 608,758 acres to these two management areas. FEIS at 3-493 to 3-494 (Table 179).

114. The proportion of the Forests in management areas allocated to timber production grew by 81,053 acres from the 1994 Forest Plan—an increase of more than 15%.

115. The Matrix and Interface management areas include a wide variety of lands. Some of those lands already have road access for timbering and were broadly supported for continued timber production. Other portions, however, have significant conservation value and no roads, making timber production controversial.

116. For example, the 2023 Forest Plan allocates to the Matrix and Interface management areas 104,568 acres that were inventoried as potentially eligible for future Wilderness designation because they are relatively unroaded and undeveloped lands. The 2023 Forest Plan allocates to those same management areas 54,686 acres of natural areas delineated as rare and exemplary habitats by North Carolina’s Natural Heritage Program. The 2023 Forest Plan allocates to those same management areas 11,860 acres that have been field verified as existing old growth according to the Forest Service’s definitions. Old-growth forests are exceedingly rare in the Eastern United States.

117. On the expanded portion of the landscape allocated to timber production, the 2023 Forest Plan aims to quintuple levels of regeneration logging achieved under the 1994 Forest Plan.

118. The Forest Service adopted a two-tiered approach to achieve its increased logging objectives in the 2023 Forest Plan. “Tier 1” objectives call for “an increase in activity based on existing capacity and budgets,” while “Tier 2” objectives call for “a greater amount of increase if additional capacity and resources are brought to bear.” FEIS at 3-30.

119. At Tier 1, the 2023 Forest Plan anticipates 2,200 acres of logging annually—1,200 acres of regeneration harvest plus 400 acres of thinning and an additional 600 acres of thinning combined with burning.

120. At Tier 2, the 2023 Forest Plan anticipates 4,700 acres of logging annually—3,200 acres of regeneration harvest plus 600 acres of thinning and an additional 900 acres of thinning combined with burning.

121. As compared to the “no action alternative” of keeping the 1994 Forest Plan as it is currently being implemented, the 2023 Forest Plan’s Tier 1 logging objectives—in terms of acres harvested—are 275% as high. The Tier 2 objectives are 588% as high.

122. In addition to expanding the footprint where logging could occur and increasing logging levels, the 2023 Forest Plan also removed forest plan standards that limited logging to protect sensitive values. For example, under the 1994 Forest Plan the Forest Service was required to survey for old-growth forests and prioritize high-quality areas for addition to a protected network of old growth patches. 1994 Forest Plan at III-26, III-28. In contrast, for the 2023 Forest Plan, the Forest Service admitted its primary interest was ensuring that logging projects could move forward whether or not old growth would be affected. To that end, the Forest Service chose to eliminate any project-level requirement to protect or even to survey for old growth when present in timber project areas. 2023 Forest Plan at 84-86 (not requiring surveys for old growth and prohibiting the addition of old growth to the protected network).

The Analytical Basis for the 2023 Forest Plan's Logging Objectives

123. To justify the 2023 Forest Plan's logging and other objectives, the Forest Service relied on a combination of models and other tools.

124. First, the Forest Service developed a reference condition for the Forests based on the modeled natural range of variation ("NRV"). The NRV (discussed more below) is a description of the Forests prior to European colonization.

125. Second, the Forest Service used its "Spectrum model" to assess how implementation of the 2023 Forest Plan would move the Forests closer to or further away from this NRV reference condition. Using these models, the Forest Service argued that the levels of logging adopted in the 2023 Forest Plan would move the Forests closer to NRV and, thus, ecological integrity.

126. Third, the agency used its Ecological Sustainability Evaluation ("ESE") tool to assess how the future effects of logging and other management actions, as forecast by the Spectrum model, would affect particular ecosystems and groups of plants and animals with similar habitat needs.

The Forest Service's Reference Condition

127. The Forests' reference condition was based on the NRV for each of the eleven forest community types, or "ecozones," that exist in the "planning area" (defined as 18 counties in western North Carolina). NRV is a description of the characteristics of ecosystems as they would have been shaped by dominant pre-European disturbance regimes. FSH 1909.12.05. To "maintain or restore" ecological integrity, Forest Service actions should be moving the condition of the Forests closer to NRV where they currently are outside of that range and maintaining conditions where they are within NRV.

128. One key aspect of the NRV is the proportion of various forest age classes—categorized as early, mid-aged, late-aged, and old—that would be expected in each ecozone.

129. To determine the NRV for these various age classes, the Forest Service first estimated the “return interval” for forest disturbances prior to European settlement—i.e., how many years, on average, each type of disturbance would be expected to recur on any given acre, thereby changing the age class of a forest by making it younger. For example, in the sheltered and wet “cove” ecozones wildfires severe enough to regenerate a new stand of trees and create early successional habitat would be expected to recur on average every 1,000 years, while in the more exposed “dry oak” ecozone severe wildfires would be expected to recur every 250 years.

130. Some of the disturbance types and frequencies on which the Forest Service purported to rely when estimating the NRV are tabulated in Appendix D to the FEIS. FEIS App’x D at D-11 (Table 4). However, the Forest Service added an additional disturbance type to the model, which it failed to disclose to the public or explain in its analysis.

131. Specifically, in addition to severe wildfires and extreme storms—the age-resetting disturbances analyzed in the FEIS and disclosed in Appendix D—the Forest Service later added an undefined “Optional” category of disturbance for five ecozones, including northern hardwoods and rich and acidic coves, which together cover about half of the Forests’ total acreage.

132. For example, by adding the unexplained Optional category, the Forest Service tripled the probability that mid-, late-, or old-aged northern hardwood forest would be affected by age-resetting disturbance in any given year. Similarly, the probability of age-resetting disturbance in mid-, late-, or old-aged cove forests increased by a factor of 5/3 or more. The

effect of adding the Optional category was to substantially increase the NRV estimate of early successional habitat in these ecozones.

133. On information and belief, the “Optional” category of disturbance modeled natural disturbances that create openings less than 1/2 acre in size. Thus, the disturbances counted toward the need for early successional habitat in the NRV model include those which create openings both larger and smaller than 1/2 acre. This 1/2-acre distinction is important because, as discussed more below, the Spectrum model assumed that early successional habitat in patches smaller than 1/2 acre would *not* count toward restoration of NRV.

134. Based on its modeling of the effects of wildfires, storms, and “Optional” disturbances, the Forest Service produced an estimate of the proportion of each age class (early, mid-aged, late-aged, and old) that would be expected in the Forests under the NRV. For example, according to the agency’s model, the cove ecozone should have between 46% and 54% old-growth conditions and only 4% to 5% early successional habitat conditions.

135. The Forest Service aggregated these ecozone-scale estimates for the various age classes to derive a landscape-wide estimate. Using its NRV model, the Forest Service estimated that between 60,610 and 84,648 acres of early successional habitat should exist in all ecozones across the Forests. In the 2023 Forest Plan, that range was rounded off to set a desired future condition: 60,000 to 90,000 acres of early successional habitat.

136. The Forest Service did not determine, as part of its reference condition, how many acres of early successional habitat should exist under NRV if accounting only for patches larger than 1/2 acre. If it had, the NRV reference condition for early successional habitat would have been lower than the 60,000- to 90,000-acre range because it would exclude the significant amounts of early successional habitat that occur in patches under 1/2 acre.

137. In addition to the relative proportions of age classes in each ecozone, the Forest Service also characterized other “key characteristics” of ecological integrity, including composition, structure, processes, disturbance gap sizes, community patch sizes, and example wildlife species.” FEIS at 3-134; *see also* 2023 Forest Plan at 54–64.

138. For example, in the cove ecozones, canopy openings should primarily be around 1/8 acre in size, though “rarer” openings between 15 and 20 acres are possible. 2023 Forest Plan at 57–58. As another example, in the northern hardwood ecozone, canopy openings between 1/4 and 1/8 acre should be most prevalent, with “occasional” patches exceeding 20 acres. *Id.* at 55.

139. As for species composition, each ecozone has its own characteristic mix of tree and other plant species. For example, the “mesic oak” ecozone should have 50% to 80% species that produce “hard mast”—primarily oaks. *Id.* at 59.

140. The 2023 Forest Plan includes no components to require maintenance or restoration of the key characteristics applicable to each ecozone. In the 2022 draft forest plan, these key characteristics were adopted as ecozone-scale desired conditions. But those desired conditions were deleted in the 2023 Forest Plan.

141. With respect to forest structure, the 2023 Forest Plan contains no standards or guidelines to maintain or restore openings in the sizes and proportions consistent with ecological integrity as defined by the Forest Service’s key characteristics. The only limit on opening size in the 2023 Plan allows openings up to 40 or 80 acres, depending on the ecozone. *Id.* at 93–94 (TIM-S-14).

142. With respect to species composition, the 2023 Forest Plan contains no requirements to ensure that composition is restored in the future when logging occurs in the Matrix and Interface management areas, despite the fact that current problems with species

composition are the result of past logging. Past logging by the Forest Service on the Forests has caused, among other things, a shift toward uncharacteristic dominance by tulip poplar in moist ecozones.

143. The Forest Service rejected an alternative that would have limited logging to treatments intended to restore characteristic species composition. U.S. Forest Serv., Record of Decision for the Nantahala and Pisgah National Forests Revised Land Management Plan at 52 (Feb. 2023).

144. Nevertheless, Forest Service’s analysis assumes that such limitations are in place, and that logging will occur only under conditions that will improve species composition. *E.g.*, FEIS at 3-148, 3-152, 3-156, 3-160, 3-164, 3-175 (assuming variously that composition will improve because “advanced oak regeneration” would be present prior to logging, “uncharacteristic vegetation [would be] removed,” or “desirable hardwoods” would be retained). Those limitations are not contained in any standard or guideline.

145. Thus, while NRV provided the justification for the overall levels of logging adopted in the 2023 Forest Plan, the 2023 Forest Plan does not include binding project-level requirements to ensure that logging is consistent with the spatial pattern and scale necessary to restore ecological integrity as the Forest Service has defined it in the key characteristics. *See* Response to Comments at 33 (“The final Plan does not include a standard that requires management consistency with the Natural Range of Variation.”). Instead, the Forest Service asserted that it could ignore the key characteristics “locally” so long as it was creating more early successional habitat at the forest-wide scale. Record of Decision at 63; 2023 Forest Plan at 53.

146. The Forest Service explained clearly that it will not evaluate at the project level whether its logging proposals will maintain or restore NRV. 2023 Forest Plan at 50. The agency

therefore will not adjust its assumptions or conclusions regarding NRV until the 2023 Forest Plan is amended or revised.

Predicted Future Effects

147. After articulating its reference condition, the Forest Service proceeded to model the future effects of implementing the 2023 Forest Plan. To do so, it relied on a separate model, the Spectrum model, which predicted how implementation of the 2023 Forest Plan and other alternatives in the EIS would change the proportions of forest age classes. *See* FEIS App'x D at D-2.

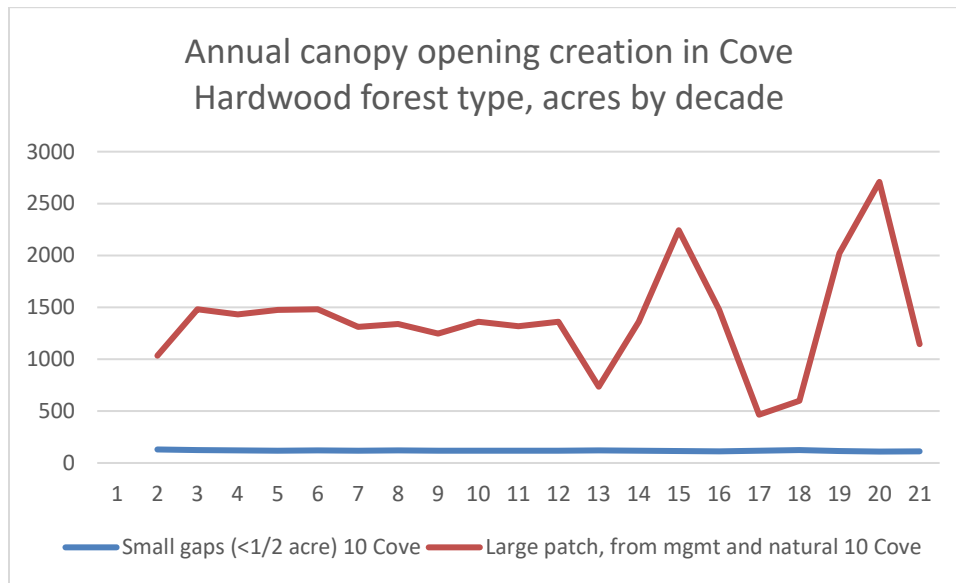
148. For example, in Spectrum, regeneration logging moves a forest to the “early” age class, as do some natural events like wildfires, albeit to a much smaller extent, as discussed below. Conversely, an area that receives no logging or other age-resetting disturbance in Spectrum would grow older, eventually progressing into old growth.

149. When setting up the Spectrum model, the Forest Service used fundamentally different assumptions than it had used in setting up the NRV model. For the Spectrum model, the Forest Service used a more limited definition of early successional habitat. The only disturbances that counted toward early successional habitat in the Spectrum model were those larger than 1/2 acre in size. FEIS App'x D at D-56. In contrast, as noted above, the NRV model estimated the need for early successional habitat based on the occurrence of disturbances creating openings both larger and smaller than 1/2 acre.

150. Spectrum shows that implementing the 2023 Forest Plan will drive the Forests away from ecological integrity by several key measures.

151. Although not disclosed in the FEIS, Spectrum's outputs reveal how the 2023 Forest Plan would affect the prevalence of canopy opening sizes in various forest types. For example, although cove ecozones should primarily regenerate in very small gaps with larger

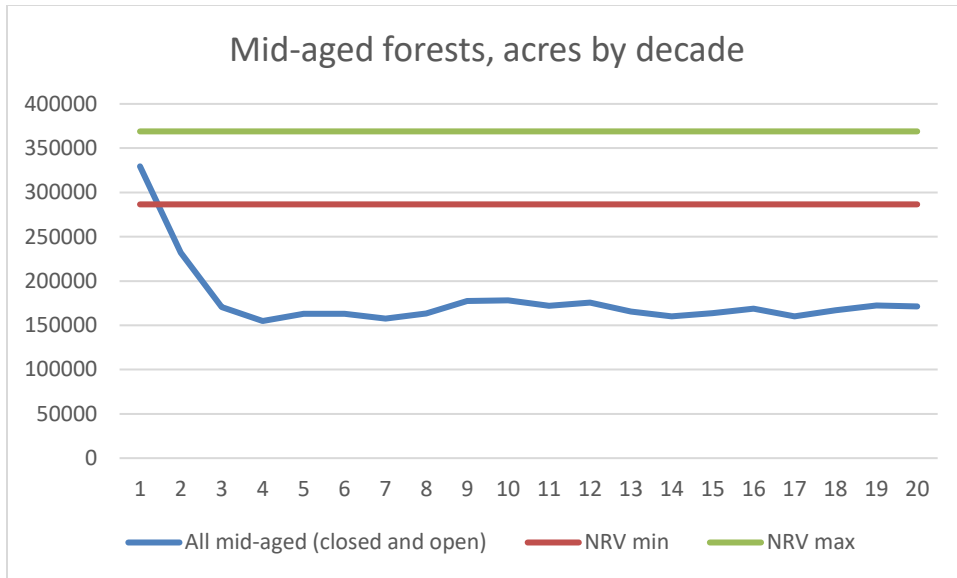
openings being rare, the 2023 Forest Plan would create large openings at approximately 12 times the acreage of small gaps, inverting that natural pattern.



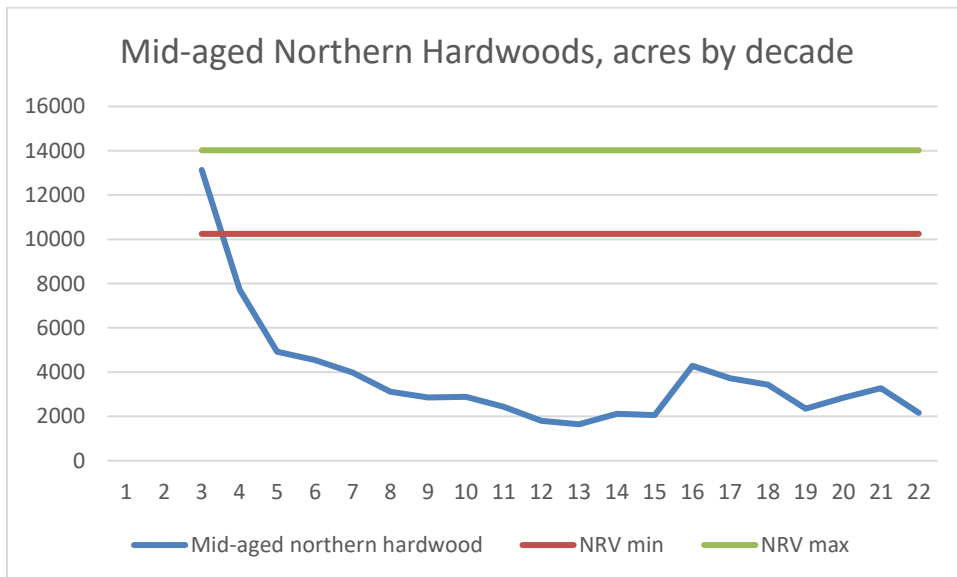
152. The Forest Service acknowledged that “[l]ocally, young forest patch size will frequently exceed average natural disturbance gap size to provide for habitat diversity and benefit wildlife, and to facilitate restoration operations and financial considerations[.]” 2023 Forest Plan at 215 (MAT-DC-02). However, the Forest Service further stated that these “local” deviations from natural gap size “will not contribute to exceeding the ecozone’s NRV at the forest level.” *Id.* at 51 (ECO-DC-03).

153. Spectrum shows that under the 2023 Forest Plan, large canopy openings will predominate in ecozones where they should be rare.

154. In addition, Spectrum shows that the 2023 Forest Plan will cause other age classes to plummet below NRV levels, both at the forest-wide and ecozone scales. For example, mid-aged forests are currently within the NRV, but Spectrum shows that they will fall below the NRV in the second decade of 2023 Forest Plan implementation and continue falling to a deficit of more than 100,000 acres.



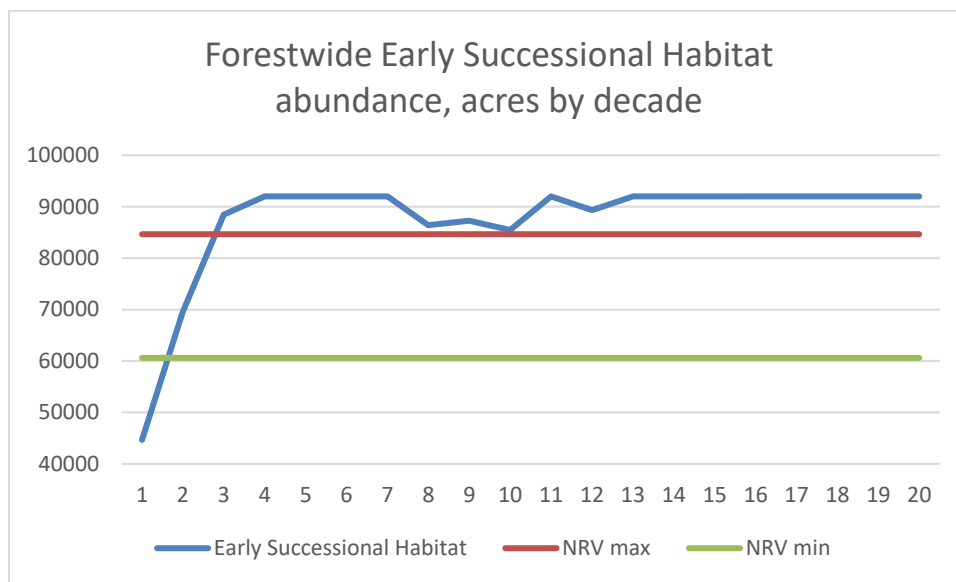
155. The 2023 Forest Plan will also cause mid-aged forests to fall far below the NRV in specific ecozones. For example, Spectrum shows that northern hardwoods, which are currently within the NRV for mid-aged forests, will fall below the NRV by the second decade of the 2023 Forest Plan’s implementation.



156. The Forest Service’s analysis does not disclose that mid-aged forests will fall below the NRV. Nor did the Forest Service consider the effect of losing mid-aged forests for ecosystems or their associated animals and plants. To the contrary, the Forest Service evaluated

effects to ecozones based on trends for “young forest, old forest closed canopy, and open canopy woodlands,” but not mid- or late-aged forests. FEIS at 3-118.

157. Spectrum’s outputs also reveal that the 2023 Forest Plan will overshoot the NRV for early successional habitat creation, at both the forest-wide and ecozone scales. At the forest-wide scale, Spectrum shows that levels of early successional habitat exceed the upper end of NRV (84,648 acres by the Forest Service’s analysis) beginning in the third decade of the analysis horizon and in every decade thereafter. Early successional habitat will also exceed the Forest Service’s rounded-up 90,000-acre cap in 13 of 20 decades.



158. The Forest Service’s analysis does not disclose that the 2023 Forest Plan will create too much early successional habitat at the forest-wide level. Instead, the Forest Service states that the 2023 Forest Plan, at Tier 2 objectives, will produce 58,100 acres of early successional habitat by year 20 (i.e., 97% of the lower end of the 60,000- to 90,000-acre range), and then would stay within the desired range “for the remainder of the planning horizon.” FEIS at 3-120, 3-124. The Forest Service does not explain the difference between its stated figures and its own internal analysis.

159. The Spectrum model and the NRV model came together in the ESE tool, which generated “scores” for ecozones and species groups as part of the agency’s effort to ensure compliance with the requirements of the 2012 Planning Rule related to plants and animals. FEIS at 3-107 to 3-108.

160. In the ESE tool, the Forest Service generated scores based on current conditions and predicted future conditions at 10 and 50 years in the future.

161. Ecozones and many species groups scored better in the ESE Tool where Spectrum showed an increase in early successional habitat toward the upper limit of the ranges estimated by the NRV model. Because Spectrum’s outputs fed directly into the ESE tool, the only disturbances that contributed to improved scores for early successional habitat in the ESE tool were those greater than 1/2 acre.

162. Multiple species evaluated in the ESE tool, including the wood thrush and blue-headed vireo (both “focal species” for the 2023 Forest Plan) as well as the endangered Virginia big-eared bat, do not routinely use early successional habitat patches larger than 1/2 acre. But the ESE tool indicated that creation of early successional habitat in large patches will benefit those species regardless.

Missing Early Successional Habitat

163. The 2023 Forest Plan’s asserted need to increase logging in service of the goal to produce 60,000 to 90,000 acres of early successional habitat fails to consider the contribution of other sources of early successional habitat.

164. The 2023 Forest Plan acknowledges that permanent sources of early successional habitat (e.g., artificial wildlife openings and mountaintop balds) contribute toward the stated need for up to 90,000 acres of such habitats. 2023 Forest Plan at 66; FEIS at 3-188. However, the Forest Service nevertheless found that permanent openings were not extensive enough to

“contribute significantly” to meeting that purported need and therefore excluded them from its assessment of existing early successional habitat on the landscape. FEIS at 3-188.

165. To the contrary, there are many thousands of acres of permanent early successional habitat on the Forests, including 5,142 acres of maintained wildlife openings, thousands more acres of mountaintop balds and naturally open areas like Graveyard Fields, and cleared rights-of-way.

166. The Forest Service did not disclose the total acreage of permanent early successional habitat in its analysis or quantify or otherwise analyze how permanent early successional habitat along with its logging objectives would cumulatively exceed NRV or its desired conditions. Stated differently, the Forest Service did not explain how these permanent sources of early successional habitat reduce the need for regeneration harvest to create early successional habitat.

167. In addition, the Forest Service’s analysis does not account for the realistic effects of natural disturbance from storms and wildfire.

168. In its 2022 draft forest plan, the Forest Service assumed that natural disturbance would not create any early successional habitat during the 200-year planning horizon. Even with zero natural disturbance, the Spectrum model showed that implementing the plan’s objectives for logging would result in early successional habitat “reaching the upper range” of 90,000 acres “in about 20 years” and then staying at that level for the remainder of the analysis period. U.S. Forest Serv., *Nantahala and Pisgah National Forests Draft Environmental Impact Statement* at 161 (2022). The Forest Service acknowledged internally that if it added *any* natural disturbance to the model, it would need to lower its logging objectives in order to prevent total levels of early successional habitat from exceeding its 90,000-acre cap.

169. Between the draft and final versions of the 2023 Forest Plan, the Forest Service decided that its models and analysis should account for at least some natural disturbance. FEIS at 3-123. For its updated analysis, the agency predicted that natural disturbance would create early successional habitat on an average of 148 acres per year in the first decade of the 2023 Forest Plan’s implementation and 214 acres per year in the second decade. Averaged out over the 20-year planning period, that comes to 181 acres per year.

170. Even with this modest addition of natural disturbance, the Spectrum model did not have “solution space” to run—meaning, as the Forest Service had previously acknowledged, that it could not meet its objectives without exceeding the 90,000-acre cap or lowering its objectives. Nevertheless, Forest Service did not lower its logging objectives, but instead raised the cap in the model.

171. The Forest Service based its low predictions of future natural disturbance on a reconstruction of disturbance levels over the past 50 years, shown in the table below. FEIS App’x D at D-61.

Table: USFS Reconstructed acres of ESH due to natural disturbance, 1970s–2010s.

ESH created by:	1970s	1980s	1990s	2000s	2010s
Wildfire	381	991	489	1659	2868
Storms	600	450	800	600	450
Insect/Disease	771	213	671	113	605
All Natural Disturbance	1752	1654	1960	2372	3923

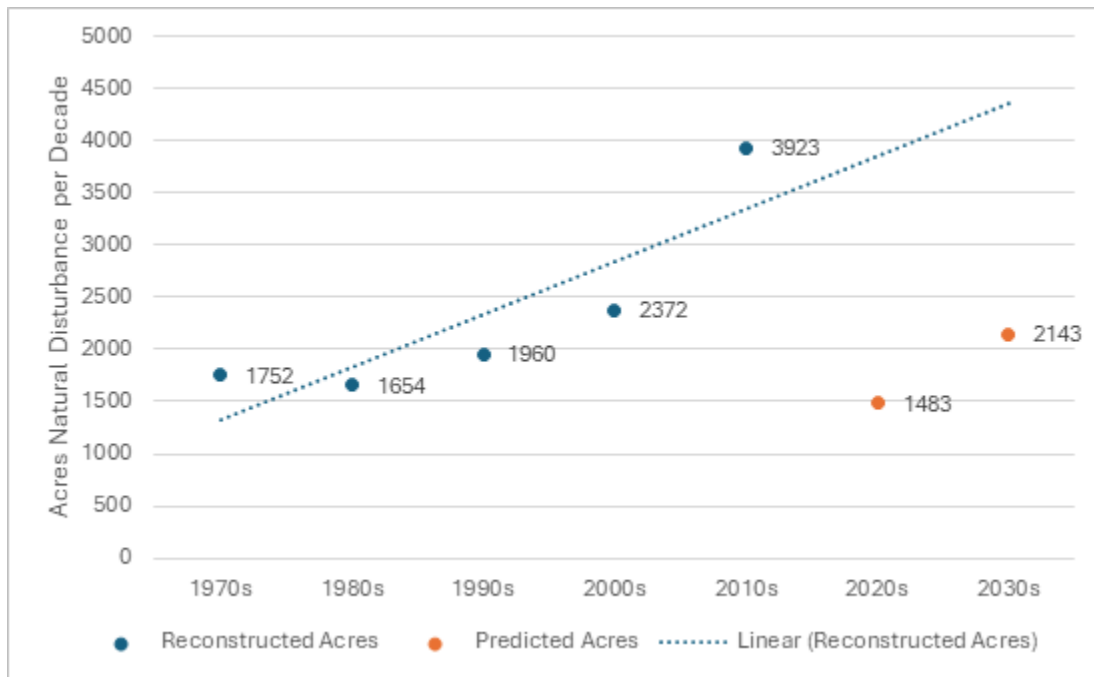
172. This reconstruction underestimated the actual levels of natural disturbance in the two most recent decades, because the Forest Service tossed out some severe wildfires as “outliers.”

173. Even assuming its reliability, the Forest Service’s reconstruction shows that acres of early successional habitat created by natural disturbance increased over the 50-year period.

Consistent with this increasing trend, elsewhere in its analysis the Forest Service acknowledged that natural disturbance would continue to increase in the future because of climate change. FEIS at 3-20. Specifically, the agency predicted more severe storms from hurricanes making landfall in the South and more periods of drought and wildfire.

174. However, when building its Spectrum model to characterize the 2023 Forest Plan’s future effects, the Forest Service did not assume that natural disturbance would continue to increase in the future. Instead, it assumed that the levels of disturbance estimated over the past 50 years would repeat on a 50-year cycle. U.S. Forest Serv., *Final Response to Objection Issues and Instructions* at 197 (Jan. 2023) (hereinafter “Objection Response”). In other words, the Forest Service predicted that disturbance levels during the 2020s would be similar to the low levels documented in the 1970s, that levels during the 2030s would be similar to those from the 1980s, and so on, as shown in the figure below. This prediction was referred to as “Scenario 1.”

Natural Disturbance: Reconstructed Trend versus Scenario 1 Prediction



175. The Forest Service’s internal reviewers observed that the Scenario 1 prediction “implies a substantial decline in the rate of disturbance projected over the next thirty years, compared to what has been seen in the last twenty.” Objection Response at 197. The reviewers encouraged the agency to “clarify” its analysis.

176. The Forest Service did develop other natural disturbance scenarios, including the so-called “Scenario 5,” which was based on the median output from a collection of climate models. Scenario 5 projected an average of 447 acres per year of early successional habitat created by natural disturbance during the analysis period.

177. Ultimately, however, the Forest Service relied on Scenario 1 when analyzing the 2023 Forest Plan’s effects on ecozones and their associated plants and animals. The Forest Service did not consider how natural disturbance under its other scenarios plus the 2023 Forest Plan’s logging objectives would cumulatively exceed NRV and its desired conditions, nor how those exceedances would affect native plants and animals.

178. In its response to public objections on this point, the Forest Service acknowledged that Scenario 1 “might seem to underestimate the likely increase in disturbances over time.” Objection Response at 198. However, it excused any error by arguing that early successional habitat would not surpass the model’s cap during “this planning cycle” no matter which natural disturbance scenario was analyzed, and that Scenario 5 would not cause “significant” changes to its analysis until 40 to 50 years in the future—i.e., in a future planning cycle. *Id.*

179. By dismissing this issue without analysis, the Forest Service failed to disclose that higher levels of natural disturbance would have very different effects at the *ecozone* scale during this planning cycle even if *forest-wide* levels of early successional habitat would not exceed NRV until farther into the future.

180. For example, the Spectrum model showed that higher levels of natural disturbance would force regeneration logging into the moist ecozones where large patches of early successional habitat should be rarest. FEIS App'x D at D-65. That is because higher levels of natural disturbance would occur disproportionately in dry ecozones (which burn more readily), lowering the agency's ability to find opportunities to conduct logging in those dry ecozones. Under Scenario 1, for example, the moist northern hardwoods ecozone would experience zero acres of logging to create early successional habitat in the first two decades and only 703 total acres in the first five decades. Under Scenario 5, however, that same moist ecozone would receive 5,906 acres of regeneration harvest in the first two decades and 13,010 acres in the first five decades.

181. The Forest Service did not consider the effects of higher natural disturbance scenarios on the northern hardwood ecozone or other moist ecozones that would bear the burden of excessive logging, within this planning cycle or any other analysis horizon. The Forest Service also failed to consider those effects on the animals and plants associated with those moist ecozones.

182. Furthermore, by disregarding forest-wide differences between the scenarios that would manifest in the 40- to 50-year timeframe (i.e., levels of natural disturbance competing with logging objectives), the Forest Service failed to consider effects within the 50-year horizon used for the ESE tool, which the Forest Service asserted was relevant to understanding the 2023 Forest Plan's effects on habitat and species diversity.

183. The 10- and 50-year scores generated by the ESE tool showed that the 2023 Forest Plan would have generally beneficial effects on ecozones and native species. Those scores, however, were based on the analysis of Scenario 1. The ESE tool's scores did not reflect

the possibility of more realistic higher-natural-disturbance scenarios or the cumulative effect of higher natural disturbance along with the 2023 Forest Plan’s logging objectives.

Logging’s Effects in the “All Lands” Context

184. Private timberlands in the planning area contain about 2.3 million acres—more than twice as many acres as the Forests. FEIS at 3-132.

185. As the Forest Service acknowledged, past logging has been occurring at higher rates on these private lands surrounding the Forests than it has on the Forests themselves. Data submitted by Conservation Groups showed that logging rates on private lands in the planning area have been about four times as high as those on the national forests.

186. Given the availability of early successional habitat on surrounding private lands, Conservation Groups encouraged the Forest Service to consider its unique opportunity to provide habitats for disturbance-sensitive animals and plants that are relatively rare on the broader landscape.

187. The Forest Service did not analyze how continued logging on private lands plus increased logging on the Forests would combine to affect animals and plants in the planning area. Instead, the Forest Service dismissed any level of future timber harvest on private lands as “uncertain” and “speculative.” FEIS at 3-132; Objection Response at 354. The Forest Service concluded that it could only predict that its own contribution to early successional habitat creation would increase. FEIS at 3-132.

188. The dismissal of continued private logging was a departure from the Forest Service’s past practice. In its analysis for the 1994 Forest Plan, the Forest Service projected the total amounts of regeneration logging on both public and private lands within the plan area. U.S. Forest Serv., *Final Supplemental Environmental Impact Statement for the Pisgah-Nantahala Forest Plan* at IV-40 (1994).

189. The dismissal of trends on private lands in the planning area was also a departure from other portions of the 2023 Forest Plan, including the Forest Service’s assessment of current and predicted future old-growth conditions.

190. For old growth, the Forest Service quantified the predicted future extent of “old forest trending” lands including both national forest and surrounding private lands. The Forest Service did not dismiss maintenance of old-growth conditions on private lands as “speculative,” as it did the future likelihood of early successional habitat creation. Instead, the agency purported to show that old forests on surrounding private lands would lessen the need to protect and restore old growth on the Forests. Specifically, the Forest Service stated that old forests on private lands would contribute to “greater buffering capacity for any natural disturbance event.” FEIS at 3-414. The Forest Service failed to offer a rationale for why it could predict old-growth conditions on private lands but not early successional habitat creation.

The 2023 Forest Plan’s Effects to Soil, Water, and Plant Communities

191. In its analysis of the 2023 Forest Plan, the Forest Service emphasized the benefits of early successional habitat creation but downplayed the negative effects of logging to create that habitat.

Logging’s Impacts to Soil Productivity

192. Logging can harm soil productivity through soil disturbance, erosion, and compaction. FEIS at 3-43. A majority of the management areas dedicated to timber production in the 2023 Forest Plan contain soils at a “severe” or “very severe” risk of erosion when bare soil is exposed by logging equipment. *Id.*

193. Soils degraded by logging operations can take more than a century to even begin to recover. *See id.* (describing slow recovery from logging in the early 1900s).

194. The models underpinning the 2023 Forest Plan showed that in order to meet the 2023 Forest Plan’s objectives, logging would occur repeatedly in the same locations on relatively short rotations (as short as approximately 50 years).

195. The Forest Service was obligated to include binding plan standards or guidelines to ensure that the 2023 Forest Plan would maintain or restore soils and soil productivity. 36 C.F.R. § 219.8(a)(2)(ii).

196. To attempt to show compliance with that requirement, the Forest Service relied on a forest plan standard providing that at least 85% of an activity area (e.g., the timber harvest unit) must not experience substantial soil impairment. Substantial soil impairment is defined as “detrimental changes in soil properties (physical, chemical, or biological) that result in the loss of the inherent capacity or hydrologic function of the soil resource that lasts beyond the scope, scale, or duration of the project causing the change.” 2023 Forest Plan at 38 n.7. According to the FEIS, “[e]ffects to the soils from projects are considered not significant . . . when 85 percent of the activity area is unaffected and retains its potential long-term productivity.” FEIS at 3-45.

197. This “85/15 threshold” was also used to monitor soil impacts under the 1994 Forest Plan. *Id.* Then, the threshold was originally adopted based on Forest Service regional guidance. *Id.* at 3-47. That regional guidance provided, “[s]oil impairment does not occur when . . . [a]t least 85% of an activity area is left in a condition of acceptable potential soil productivity following land management activities.” FSH 2509.18.2.2, Regional Supplement No. R8 2509.18-2003-2 (2003).

198. The Forest Service subsequently recognized, however, that “there is little or no documented evidence of any connection between disturbance thresholds and [soil] productivity.” U.S. Forest Serv., *Scientific Background for Soil Monitoring on National Forests and*

Rangelands: Workshop Proceedings, April 29-30, 2008, Denver, Colorado, RMRS-P-59, at 21 (2010). It acknowledged that empirical findings “clearly show that [the 15% threshold] will lead to erroneous conclusions on many sites.” *Id.* at 24.

199. Consequently, the regional guidance adopting the “85/15 threshold” was withdrawn. Instead, the Forest Service Manual now instructs the agency to develop standards and guidelines for soil protection using the best available science during forest planning.

200. Nevertheless, the Forest Service “carried over” the 85/15 threshold from the 1994 Forest Plan to the 2023 Forest Plan “without making any adjustments” because “soil disturbance monitoring indicates that the standard has been adequate to maintain an acceptable level of soil productivity while facilitating logging operations.” FEIS App’x A at A-24. However, the monitoring data relied upon in the FEIS show only that the 85/15 threshold was often *met*, not that adherence to the standard has been *effective* in maintaining or restoring soil productivity.

Impacts to Water Quality from Logging and Associated Roadbuilding

201. The Forest Service acknowledged that recently logged areas create “an elevated risk to stream channels” and sediment impacts to streams can persist for fifteen years even when best management practices are utilized. FEIS at 3-59. The Forest Service also acknowledged that forest roads, including those built to facilitate logging, “pose the greatest risk to streams, both stream channels and water quality.” *Id.* at 3-57. Roads and logging affect water quality by, for example, concentrating and diverting stormwater flows, changing runoff patterns, and causing erosion.

202. Despite increasing logging by 588% compared to levels achieved under the 1994 Forest Plan, the Forest Service concluded that logging under the 2023 Forest Plan would not adversely affect water quality. Instead, it found that the 2023 Forest Plan would result in “an

improving trend in water quality associated with the harvest of timber.” *Id.* at 3-75; *see also id.* at 3-73.

203. To justify that conclusion, the Forest Service relied on its monitoring records for the implementation and effectiveness of mitigation measures known as “best management practices,” or “BMPs.” According to the Forest Service, timber harvest BMPs are implemented and effective 94.8% of the time. Given this rate of effectiveness, the agency stated that, with the continued use of BMPs, timber harvest “would not adversely impact water quality.” *Id.* at 3-75.

204. However, as Conservation Groups explained to the Forest Service, its BMP effectiveness rate is misleading. Typically, many BMPs work together to protect a stream. The failure of one or a few BMPs can directly lead to sediment pollution, even if other BMPs remain functioning. The Forest Service’s BMP rating system did not account for this dynamic. Instead of assessing whether the BMPs were collectively doing their job (i.e., is sediment pollution reaching the stream, yes or no?), the agency decided to score each individual BMP separately (i.e., is this single BMP operational, yes or no?). Under this approach, BMP success rates can mask the failure of BMPs to protect water quality.

205. Indeed, BMP failures leading to sediment pollution are common on the Forests. According to the agency’s own monitoring data, for 25 timber sales on the Nantahala, Pisgah, and Uwharrie National Forests between 2009 and 2013, “visible sediment” pollution—which is prohibited under North Carolina state law, 2 N.C. Admin. Code 60C.0201—reached streams on 40 occasions, FEIS at 3-45, 3-60. Five of those were considered “critical” events (i.e., high-volume or long-term delivery of sediment to a stream that would be obvious even to a “casual observer”). *Id.* at 3-45.

206. In other words, the Forest Service's own data show logging pollutes streams with sediment an average of 1.6 times per timber sale. And on average, one out of every five timber sales (one sale per year) causes "critical" sediment pollution.

207. More recent data not disclosed in the FEIS show similar problems. In the sixty-three timber sales surveyed between 2009 to 2018, BMP failures caused visible sediment to reach streams on 70 separate occasions. Despite the fact that logging was polluting streams with sediment more than once per sale on average, the Forest Service still reported its BMPs were 97.4% effective.

Impacts of Unmaintained Roads

208. The Forests contain hundreds, if not thousands, of miles of roads that are not maintained to standard.

209. Unmaintained roads result in erosion, sedimentation, and barriers to the movement of fish and other aquatic organisms. A 2015 survey of infrequently used roads on the Forests showed that 40% of stream crossings violated state prohibitions on accelerated erosion in a stream crossing or visible sediment directly entering the stream.

210. The Forest Service acknowledged generally in the FEIS that unmaintained roads cause water quality problems. During its 2012 assessment of watershed conditions, the agency found that "roads in general were identified as not maintained to standard across the Forest, therefore culverts are more prone to plugging and failure, road surfacing is not maintained and replenished and thus more prone to rutting, concentrating runoff and road failure." FEIS at 3-59; *see also id.* at 3-58 ("Much of the road network is a remnant of decades ago and often not designed to current standards.").

211. Many roads on the Forests are not maintained because the Forests lack the funding to maintain them. As a result, there is a chronic maintenance backlog. *See e.g., id.* at 3-514 (“The current road system has a backlog of maintenance needs.”)

212. Separate Forest Service travel management analyses from 2012 and 2015 found that the Pisgah and Nantahala only have approximately 12.5% and 14% of needed funding, respectively, to maintain their roads to standard.

213. In its FEIS, the Forest Service acknowledges that, “[i]n order to provide [a road system that meets regulatory requirements], new sources of funding must be identified or required maintenance must be reduced, either by reducing mileage or reducing existing maintenance levels.” *Id.* at 3-517.

214. Maintaining roads will be further complicated by climate change. Because “storm runoff associated with climate change” is predicted to “increase[,]” the “risk of road erosion would likely increase” as well. *Id.* at 3-59.

215. Despite recognizing the general problem posed by unmaintained roads, the compounding effects of climate change, as well as the Forests’ extensive maintenance backlog, the FEIS nonetheless concludes without data or analysis that, across the Forests, “most [existing] roads and trails are properly designed, constructed *and maintained* to mitigate the hazard of erosion by effectively draining storm runoff with [BMPs].” *Id.* at 3-48 (emphasis added).

216. As a result, the FEIS does not attempt to assess the baseline effects of the Forests’ unmaintained roads.

217. To justify its conclusion that roads across the Forests are adequately maintained, the Forest Service pointed to BMP monitoring data from 2009–2013, which it claimed showed road BMPs were 93.1 and 94.7% effective on the Nantahala and Pisgah, respectively. *Id.* at 3-58.

218. Conservation Groups explained that the success rates for road BMPs, like the timber BMPs described above, were misleading.

219. To start, the agency's sample was admittedly "small": it sampled only 3% of locations where roads cross streams in the planning area. FEIS at 3-58.

220. More importantly, the Forest Service's road BMP monitoring data was collected only in connection with recently implemented timber sales, during which roads are actively maintained or improved. The agency did not collect data from older roads that have not been maintained to schedule—even though these roads are "often not designed to current standards," *id.*, and "may be contributing" to water-quality impairments as far away as South Carolina, *id.* at 3-55.

221. Even when properly designed, road BMPs require maintenance over time to continue being effective. The Forest Service did not explain how road BMPs will be "maintained" across the Forests in the future when it knows that roads are currently "not maintained to standard across the Forest," *id.* at 3-59, there is "a backlog of maintenance needs," *id.* at 1-13, and it lacks the resources to address this backlog, *id.* at 3-517.

222. In summary, the FEIS does not attempt to assess the baseline effects of unmaintained roads—i.e., the extent of these negative effects caused by the maintenance backlog. Instead, the Forest Service merely concluded that currently unmaintained roads will somehow be successfully "maintained" in the future.

Impacts of New Roads

223. Conservation Groups asked the Forest Service to analyze how building new roads would exacerbate the maintenance backlog and lead to even greater negative effects.

224. The Forest Service avoided analyzing the effects of an expanding road system by asserting that "there is unlikely to be a gain in overall road miles." FEIS at 3-521. The Forest

Service carried this no-net-gain assumption forward into its evaluation of effects to wildlife species that are harmed by roads, concluding that conditions would not worsen for those species because road density would not change.

225. The Forests' current road network consists of 2,320 miles of roads. There are an additional 37 miles of "unauthorized" roads.

226. Continued road construction is necessary to implement the 2023 Forest Plan because the current road system does not provide access to all the lands where timber harvest would occur. *Id.* at 3-567. Although not disclosed in the FEIS, the Forests' internal analysis shows that implementing the 2023 Forest Plan will require construction of 800 additional miles in the Matrix management area over multiple planning cycles.

227. The FEIS acknowledges that some road construction will occur to implement the 2023 Forest Plan. However, the FEIS concludes that new road construction will be offset by objectives for road decommissioning. *Id.* at 3-521.

228. According to the FEIS, logging levels at Tier 1 and Tier 2 will require 3.1 and 5.2 new miles of system road per year, respectively. *Id.*

229. These numbers are significant underestimates. In the past, new system road construction has occurred at a rate of 3.1 miles per year to support a timber program harvesting 800 acres per year. If road construction continues at the same rate as under the 1994 Forest Plan, therefore, Tier 1 and Tier 2 levels of logging (2,200 and 4,700 acres) would require over 8.5 and 18 miles per year of new system road construction, respectively.

230. Whether one uses the road construction numbers in the FEIS or assumes that road construction rates will follow past trends, the Forest Service's decommissioning objectives will not offset new road construction.

231. The Forest Service points to two decommissioning objectives in its FEIS to justify its conclusions that new road construction will be offset by road decommissioning. *See* FEIS at 3-521.

232. The first, a Tier 1 objective, calls for obliterating 20 miles of unauthorized roads over the life of the 2023 Forest Plan. 2023 Forest Plan at 107 (TA-O-04). That averages out to 1 mile of unauthorized road removal per year.

233. The second, a Tier 2 objective, calls for decommissioning 10% of “unneeded” road miles in the Backcountry management. 2023 Forest Plan at 108 (TA-O-06). There are only 42 miles of total roads in the Backcountry management area. FEIS at 3-519. Thus, the 2023 Forest Plan calls for a maximum of 0.2 miles of system road decommissioning per year assuming a twenty-year forest planning cycle (i.e., decommissioning 4.2 miles of road over twenty years).

234. In sum, the Forest Service will obliterate or decommission a maximum of 1 and 1.2 miles of road at Tier 1 and Tier 2, respectively. That is not enough to offset the FEIS’s predicted construction of 3.1 and 5.2 new miles per year at Tier 1 and Tier 2, respectively. Nor is it enough to offset road construction at rates consistent with past trends, which would equal 8.5 and 18 miles per year of new system road construction at Tiers 1 and 2, respectively.

235. The differences in rates of road construction and decommissioning add up. Assuming the agency reaches Tier 2, the agency will decommission or obliterate a maximum of 24.2 miles of road over the 20-year life of the forest plan. Over that same time period, using the agency’s own numbers, it will construct 104 miles of new road—more than quadruple the amount of road miles decommissioned. And if road construction follows past trends, the Forest Service would construct 364 miles of new system road in that period—more than 15 times the amount of road miles decommissioned.

236. Because the Forest Service mistakenly assumed its road network would not expand, it did not disclose or consider how the inevitable expansion of its road network will affect its maintenance backlog and affect the environmental values affected by poorly maintained roads.

237. Nor did the Forest Service consider how the 2023 Forest Plan would affect water quality if the Forest Service failed to meet its Tier 2 objectives for mitigating harm from the expanded road system.

238. At Tier 1, the Plan calls for maintaining 280 miles of the Forests' 2,320 total miles of roads annually. At this level of maintenance, however, the Forests would continue to operate with a backlog of deferred maintenance. At Tier 2, the Plan calls for—but does not require—reducing the road maintenance backlog by 10% annually.

239. Conservation Groups asked the Forest Service to make reduction of the maintenance backlog an explicit requirement of the 2023 Forest Plan in order to operate at Tier 2 levels of logging. The Forest Service declined to do so.

240. The Forest Service's analysis does not consider or disclose the effects of logging and expanding the road system at Tier 2 levels without also meeting its objectives to reduce the maintenance backlog.

Non-Native Invasive Species

241. Ground disturbance from logging and associated roads creates a risk of spreading non-native invasive plants. FEIS at 3-147, 3-163.

242. Non-native invasive plants threaten the integrity of native ecosystems and forest health. *See id.* at 3-20 (“Non-native and invasive plant and insect species may increasingly outcompete or negatively affect native species in the future.”).

243. Invasive species are expected to spread under the 2023 Forest Plan. The FEIS explains that “it is anticipated that there would be an increased risk of infestations with Tier 1 objectives compared to [the 1994 Forest Plan].” *Id.* at 3-451. And “the increased amount of vegetation management activities would further increase the risk of spread” under Tier 2. *Id.*

244. Consequently, Conservation Groups asked the Forest Service to adopt forest plan requirements that would prohibit the agency from logging at Tier 2 levels if it was not also treating non-native invasive species at Tier 2 levels. The Forest Service agreed that with “the increased potential for more invasive species under Tier 2 vegetation management objectives, the Tier 2 objectives for invasive species treatment should be implemented in order to reduce the potential impacts of new invasive species infestations.” *Id.* at 3-450. But the agency declined to require additional treatment of invasive species as a condition of moving to Tier 2 logging levels.

245. As a result, the Forest Service can move to Tier 2 logging levels under the 2023 Forest Plan without commensurate increases in invasive species treatments. The Forest Service did not disclose or consider the effects of logging at Tier 2 levels without also treating non-native invasive plants at Tier 2 levels.

Developments Since the 2023 Forest Plan’s Finalization

246. The Forest Service has begun implementing the 2023 Forest Plan through on-the-ground projects such as the Southside Project, already completed, and the Nantahala Mountains Project, GAP Project (GAP stands for the three ranger districts of the Pisgah National Forest—Grandfather, Appalachian, and Pisgah), and others that have reached or will imminently reach a decision.

247. When Conservation Groups have pointed out problems in specific projects that stem from errors related to the 2023 Forest Plan and FEIS, the Forest Service rejected those

concerns as “beyond the scope” of the specific project. *See* Letter to Nantahala Mountain Project Objectors, from James Melonas, Forest Service (May 6, 2024) (Exhibit 1).

248. Upon information and belief, the Forest Service has no intention of fixing its plan-level errors related to ecological integrity through site-specific project analysis. NRV is inherently a landscape-level measure, and NRV can be neither achieved nor precluded by a single project. *See* 2023 Forest Plan at 50 (“NRV is to be used at the landscape scale.”). Accordingly, as the Forest Service has explained, NRV will “not be evaluated at the project level.” *Id.*

249. Indeed, the Forest Service is already selling timber in projects that have received no project-level NEPA analysis, much less reconsideration of the scale at which logging is needed to restore ecological integrity. For example, the agency recently accepted bids to conduct salvage logging on the Pisgah in state-designated natural heritage areas and in the Appalachian Trail corridor without conducting scoping, public comment, or pre-decisional NEPA review. In the coming weeks, the Forest Service will open bids for additional logging projects that encroach on Inventoried Roadless Areas, old-growth forests, Backcountry management areas, and additional state-designated natural areas—again without first conducting project-level NEPA analysis.

250. Additionally, on September 26 and 27, 2024, Hurricane Helene swept across the Forests. By the Forest Service’s estimate, the storm caused around 117,000 acres of vegetation loss on the Forests.

251. The storm created tens of thousands of acres of early successional habitat on the Forests.

252. Additional early successional habitat, in the hundreds of thousands of acres, was created on non-Forest Service lands in western North Carolina.

253. Conservation Groups presented the information about Helene's impacts to the Forest Service in a letter explaining that these levels of natural disturbance illustrated the fundamental flaws in the 2023 Forest Plan's analysis which Conservation Groups have long pointed out to the agency.

254. The Forest Service did not respond to Conservation Groups' letter.

255. Meanwhile, as noted above, the Forest Service is proceeding with projects tiered to the 2023 Forest Plan, including projects proposing to use logging to create early successional habitat.

CLAIMS FOR RELIEF

Claim 1: The Forest Service failed to take a "hard look" at the 2023 Forest Plan's effects on numerous environmental resources in violation of NEPA and the APA.

256. Conservation Groups incorporate by reference paragraphs 1 to 255.

257. NEPA required the Forest Service to take a "hard look" at the 2023 Forest Plan's environmental effects through preparation of an EIS. *Dep't of Navy*, 422 F.3d at 185; 36 C.F.R. § 219.5(a)(2)(ii); *see generally* 42 U.S.C. § 4332.

258. EISs must consider all "reasonably foreseeable environmental effects," including both "local short-term" effects and "long-term" effects, as well as "alternatives to the proposed agency action." *Id.* § 4332(C).

259. A "hard look" requires accurate assessment and public disclosure of baseline conditions which are the starting point of an agency's environmental analysis. *See Or. Nat. Desert Ass'n*, 840 F.3d at 568-69; 36 C.F.R. § 220.4(f).

260. “NEPA also requires that agencies assess the cumulative impacts of their actions.”

Earth Island Inst., 442 F.3d at 1159.

261. The Forest Service was required to “ensure the professional integrity, including scientific integrity, of the discussion and analysis” in the EIS, as well as use “reliable data and resources.” 42 U.S.C. § 4332(D), (E).

A) The Forest Service failed to take a hard look at the effects of logging and roads on water quality and species.

262. The Forest Service’s analysis of logging and roads failed to satisfy NEPA’s hard look requirement in at least three ways.

263. First, the Forest Service failed to accurately assess and disclose the existing condition of its road network.

264. The Forests have an expansive road network of thousands of miles. “[R]oads in general were identified as not maintained to standard across the Forest.” FEIS at 3-59. Unmaintained roads result in erosion, sedimentation, and barriers to the movement of fish and other aquatic organisms.

265. Unmaintained roads on the Forests will continue deteriorating under the 2023 Forest Plan. The Pisgah and Nantahala National Forests only have approximately 12.5% and 14% of needed funding, respectively, to maintain their roads to standard.

266. Nevertheless, based on a sample of 3% of stream crossings on *recently maintained* roads, the FEIS baldly assumes that “most roads and trails are properly designed, constructed and maintained to mitigate the hazard of erosion by effectively draining storm runoff with [BMPs].” FEIS at 3-48.

267. The FEIS uses this erroneous assumption to justify its failure to assess and disclose the baseline environmental effects of the agency’s failing road system.

268. Second, the FEIS is based on the false assumption that the Forests' road network will not expand under the 2023 Forest Plan.

269. Logging requires road construction to access timber.

270. The 2023 Forest Plan significantly expands the geographic footprint of areas suitable for timber production and dramatically increases annual levels of logging.

271. Logging at the levels called for by the 2023 Forest Plan will require at least 104 miles of new road construction during the first two decades of the Plan and, if current trends hold, 364 miles.

272. Road construction involves ground disturbance that creates a risk of erosion and sedimentation, negatively affecting water quality.

273. The FEIS dismisses these effects by assuming that new road construction will be offset by objectives for road decommissioning and therefore the road system will not expand.

274. The 2023 Forest Plan calls for decommissioning or obliterating 1 and 1.2 miles of road at Tier 1 and Tier 2, respectively. That is not enough to offset the FEIS's predicted construction of 3.1 and 5.2 new miles per year at Tier 1 and Tier 2, respectively. Nor is it enough to offset road construction at rates consistent with past trends, which would equal 8.5 and 18 miles per year of new system road construction at Tiers 1 and 2, respectively.

275. The Forest Service relied on its erroneous assumption that the road network would not expand to arbitrarily conclude that (1) the 2023 Forest Plan would lead to a "static to improving trend" in water quality related to roads and (2) that ecosystems and species that are sensitive to road density would not be adversely affected by the 2023 Forest Plan.

276. Third, the Forest Service erroneously concluded that the 2023 Forest Plan, even at the top end of logging levels, would result in "an improving trend in water quality associated

with the harvest of timber” and “static to improving” conditions for water quality related to logging roads. In other words, the Forest Service assumed that the additional ground disturbing activity from logging and roads would cause no additional harm to waters.

277. As support for its zero-marginal-risk finding, the Forest Service relied on monitoring data showing that its BMPs for logging and road construction are usually implemented as required and function effectively. But the agency turned a blind eye to evidence that logging under the 1994 Forest Plan caused significant harm, despite the use of those same best management practices.

278. Because the Forest Service (1) failed to accurately assess the environmental baseline of its road network, (2) arbitrarily concluded that its road network would not expand under the 2023 Forest Plan, and (3) erroneously assumed that increases in logging and road construction would result in no increased risk to water quality because of BMPs, it failed to take a “hard look” at impacts to water quality and species, in violation of NEPA and the APA.

5 U.S.C. § 706(2); 42 U.S.C. § 4332.

B) The Forest Service failed to take a hard look at soil impacts.

279. Logging, logging equipment, and associated ground disturbance can impair soil productivity.

280. New logging projects under the 2023 Forest Plan will result in impacts to soil quality.

281. Nevertheless, the Forest Service concluded that logging and associated road and skid-trail construction under the 2023 Forest Plan would not impair long-term soil productivity.

282. To reach that conclusion, the agency relied on a 2023 Forest Plan standard limiting “substantial soil impairment” to no more than 15% of any “activity area” (e.g., timber harvest units).

283. The Forest Service’s 15% threshold was based on rescinded Forest Service guidance. That guidance was withdrawn because the 15% threshold was not based on the best available science.

284. The Forest Service did not provide another basis for concluding that the 15% threshold is effective. Instead, it merely observed that the Forest Service has done “a good job” of meeting that threshold previously. Objection Response at 245.

285. The Forest Service had no scientific basis for its assumption that damaging less than 15% of an area’s soils in a single timber harvest will ensure that soils are not degraded in the long term.

286. Because the Forest Service arbitrarily relied on the 15% threshold, it consequently failed to take a “hard look” at impacts to soil productivity as required by NEPA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332. The Forest Service’s circular and arbitrary soils analysis also lacked “scientific integrity” and was not based on reliable data, in violation of NEPA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

C) The Forest Service failed to take a hard look at effects on non-native invasive species and sedimentation by moving from Tier 1 to Tier 2 logging levels without requiring Tier 2 levels of mitigation.

287. Under the 2023 Forest Plan, the Forest Service adopted a two-tiered set of objectives: “Tier 1 objectives” that it believed were within its fiscal capacity and “Tier 2 objectives” that it believed were beyond its own fiscal capacity but could be achieved with contributions by external partners.

288. In its analysis, the Forest Service assumed that Tier 2 levels of logging would be accompanied by Tier 2 levels of actions needed to mitigate the harm from logging—namely, road maintenance and non-native invasive plant treatments.

289. But the 2023 Forest Plan does not condition increased logging on increased levels of mitigation. Instead, the 2023 Forest Plan makes explicit that objectives to increase logging are independent of other objectives, including the objectives necessary to mitigate the harms it causes.

290. The Forest Service does not have the resources to mitigate the harms from Tier 2 levels of logging.

291. Therefore, it is reasonably foreseeable that logging at Tier 2 levels will have unmitigated impacts on invasive plant infestations and sedimentation.

292. The Forest Service failed to disclose or consider the effects of logging at Tier 2 levels without Tier 2 levels of mitigation, even though (1) the 2023 Forest Plan explicitly allows for Tier 2 logging levels without mitigation, and (2) the Forest Service lacks the resources to mitigate logging at those levels, in violation of NEPA’s “hard look” requirement. 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

Claim 2: The Forest Service’s analysis of early successional habitat violates NEPA, procedural NFMA requirements, and the APA.

293. Conservation Groups incorporate by reference paragraphs 1 to 255.

294. In addition to the procedural NEPA requirements discussed above, NFMA and the 2012 Planning Rule require the Forest Service to use the “best available scientific information to inform the planning process.” 36 C.F.R. § 219.3.

295. The 2012 Planning Rule also requires consideration of the “context of the broader landscape” when making planning decisions. 36 C.F.R. § 219.1. This orientation is referred to as

the “all lands” perspective on planning, and it requires the Forest Service to “look beyond the unit boundary and develop an understanding of management issues on the plan area within the context of the broader landscape.” 77 Fed. Reg. at 21,173.

A) The Forest Service’s analysis of early successional habitat levels violates NEPA’s hard look requirement.

296. The Forest Service’s stated goal in developing the 2023 Forest Plan was to create early successional habitat levels in line with NRV.

297. To determine the needed levels of early successional habitat (i.e., the NRV reference condition), the Forest Service assumed that patches created by natural disturbances that were smaller than 1/2 acre would count toward early successional habitat conditions.

298. After accounting for these less than 1/2-acre patches in its modeling, the Forest Service determined that the NRV for early successional habitat is between 60,610 and 84,648 acres across the Forests, then rounded to a range of between 60,000 and 90,000 acres as its desired future condition.

299. However, the 2023 Forest Plan states that there is a need to create at least 60,000 and up to 90,000 acres of early successional habitat in patches *greater than or equal to* 1/2 acre in size, primarily through logging.

300. In effect, the Forest Service used patches less than a 1/2 acre in size to boost NRV levels for early successional habitat, then turned around and claimed that these same patches would not move the Forests toward NRV. Despite repeated critiques from the public, the Forest Service never explained this inconsistency.

301. If the Forest Service had used the NRV model to determine how much early successional habitat is needed in patches greater than or equal to 1/2 acre, the need to create such habitat would have been lower because it would have excluded smaller patches. This difference

would have been substantial, especially in moist ecozones like the cove and northern hardwoods ecozones.

302. Because the Forest Service relied on inconsistent assumptions regarding early successional habitat, it failed to examine the impacts of (1) replacing small-scale natural disturbances with large-scale logging, and (2) overshooting NRV for early successional habitat. As a result, it failed to take a “hard look” at the 2023 Forest Plan’s effects on early successional habitat as required by NEPA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

B) The Forest Service’s inconsistent analysis of early successional habitat and old-growth forests on surrounding non-federal lands violated NEPA and NFMA.

303. As noted above, the 2012 Planning Rule requires the Forest Service to utilize an “all lands” approach to forest planning. This includes consideration of activities on private lands surrounding a national forest.

304. Conservation Groups provided the Forest Service with data showing that recent annual logging rates on nearby private lands were around four times as high as logging on the Forests themselves.

305. The Forest Service admitted that logging levels on surrounding private lands in the recent past have been much higher than on federal lands. However, because there was no “assurance” that this logging would continue, the Forest Service claimed that it is “uncertain” and “speculative” whether logging on non-federal lands would continue in the future. FEIS at 3-132; Objection Response at 354. As a result, the agency declined to analyze how non-federal logging affects the supposed need for logging and early successional habitat on federal lands.

306. However, when assessing the need to manage federal lands for old-growth maintenance and restoration, the Forest Service identified surrounding non-federal lands “that

would *likely trend* toward old forest conditions.” FEIS at 3-413 (emphasis added). Though the Forest Service likewise had no “assurance” that these off-Forest trends would continue, including future old growth found on non-federal lands in its calculations allowed it to minimize the area set aside for old-growth protection on the Forests.

307. The Forest Service did not explain why it treated future logging levels on non-federal lands (which it did not consider) differently than future old-growth development on non-federal lands (which it did consider).

308. Because the Forest Service (1) arbitrarily ignored available data on logging rates on surrounding state and private lands and (2) inconsistently analyzed trends on surrounding lands without adequate explanation, it failed to take a “hard look” at the 2023 Forest Plan’s cumulative effects on the broader landscape as required by NEPA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332. It also violated NFMA’s requirement to make forest planning decisions based on the “context of the broader landscape” 5 U.S.C. § 706(2); 36 C.F.R. § 219.1.

C) The Forest Service’s failure to account for other sources of early successional habitat besides logging violated NEPA and NFMA.

309. When projecting future levels of early successional habitat, the Forest Service accounted only for disturbance caused by logging, prescribed fire, and a tiny amount of natural disturbance.

310. By ignoring sources of additional early successional habitat, the Forest Service purported to show a higher need for logging than is sustainable consistent with ecological integrity.

311. If the Forest Service had accounted for these sources of additional early successional habitat, it would not have been able to justify its high logging objectives, nor would it have assumed the need for such a large land area dedicated to timber production.

312. The Forest Service’s failure to account for these other sources of early successional habitat was not consistent with NFMA’s requirement to use the best available science or NEPA’s requirement to ensure the “scientific integrity” of its analysis. It also violated NEPA’s “hard look” and cumulative-effects requirements.

i. The Forest Service’s analysis did not account for existing, non-ephemeral early successional habitat.

313. The Forest Service’s analysis of the need to create early successional habitat failed to account for existing early successional habitat that will continue to exist in the future.

314. The Forests contain thousands of acres of early successional habitat that will be naturally or artificially maintained in early successional condition in the future. This includes 5,142 acres of maintained wildlife openings. It also includes thousands more acres of mountaintop balds and openings like Graveyard Fields. Finally, it includes an undisclosed but significant acreage of maintained rights-of-way.

315. The Forest Service did not count any of this non-ephemeral early successional habitat when predicting future levels of early successional habitat, in violation of NFMA’s requirement to use the best available science, 5 U.S.C. § 706(2); 16 U.S.C. § 1604; *see* 36 C.F.R. § 219, as well as NEPA’s requirements to ensure the “scientific integrity” of its “hard look,” 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

ii. The Forest Service’s analysis did not account for early successional habitat created by natural disturbance.

316. The Forest Service’s analysis of future conditions also fails to account for early successional habitat created by realistic levels of natural disturbance.

317. The Forest Service arbitrarily assumed that levels of natural disturbance during the first two decades of 2023 Forest Plan implementation would dramatically decrease to the low

levels reconstructed from the 1970s and 1980s. Specifically, the Forest Service assumed that natural disturbance would contribute a mere 148 acres per year in the first decade of the 2023 Forest Plan's implementation and 214 acres per year in the second decade (for an average of 181 acres annually).

318. This assumption was inconsistent with historical trends and other assertions in the FEIS that predicted an increase in natural disturbance.

319. The Forest Service modeled other scenarios in which natural disturbance levels were higher—up to 447 acres/year. With more natural disturbance, the Forest Service's model showed that the 2023 Forest Plan would force logging into moist ecozones. The 2023 Forest Plan will create too much early successional habitat relative to the NRV in those ecozones.

320. Because the Forest Service failed to disclose the cumulative effects of realistic levels of natural disturbance combined with the 2023 Forest Plan's logging objectives, it failed to take a "hard look" as required by NEPA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332. In addition, because the agency arbitrarily assumed that natural disturbances would decrease during the planning period, it failed to ensure the "scientific integrity" of the agency's analysis, in violation of NEPA, 5 U.S.C. § 706(2); 42 U.S.C. § 4332, or use the best available science as required by NFMA and the 2012 Planning Rule, 5 U.S.C. § 706(2); 16 U.S.C. § 1604; *see* 36 C.F.R. § 219.

Claim 3: The Forest Service's failure to include binding standards and guidelines to maintain and restore ecological integrity, and its related failure to disclose how the 2023 Forest Plan will degrade ecological integrity, violated NEPA, procedural and substantive NFMA requirements, and the APA.

321. Conservation Groups incorporate by reference paragraphs 1 to 255.

322. Forest plans must include plan components, including standards or guidelines that are binding on individual projects, to maintain or restore ecological integrity. 36 C.F.R.

§§ 219.8(a); 219.7(e)(1)(iii), (iv). Ecological integrity, in turn, is defined as the condition of being “within the natural range of variation.” *Id.* § 219.19.

323. Forest plan components must also be “integrated,” meaning that any plan component cannot prevent the accomplishment of another.

324. Under NEPA, agencies must consider and disclose the environmental effects that are relevant to their decisions, which here includes the 2023 Forest Plan’s effects on ecological integrity. 42 U.S.C. § 4332(C).

325. The Forest Service’s failure to adopt binding project-level standards or guidelines to maintain and restore ecological integrity and its failure to disclose and consider the effects of implementing the 2023 Forest Plan without those standards and guidelines, violated NFMA, NEPA, and the APA.

A) The 2023 Forest Plan will not maintain or restore canopy opening sizes consistent with the NRV.

326. As defined by the Forest Service, one key characteristic of NRV for each ecozone is the appropriate size of disturbance-caused gaps in the forest canopy.

327. The 2023 Forest Plan does not include any standards or guidelines to ensure that logging-created gaps are consistent with NRV for the relevant ecozone(s), in violation of the 2012 Planning Rule.

328. The Forest Service asserted that “local” deviations from natural gap sizes would not cause any ecozone to exceed the NRV at the landscape scale.

329. But the Forest Service’s internal analysis showed that, as a result of implementing the 2023 Forest Plan without standards or guidelines to limit gap size by ecozone, canopy openings in ecozones where large patches of early successional habitat should be “rare” will instead be dominated by large patches.

330. Because the Forest Service did not disclose the expected predominance of large patches of early successional habitat in ecozones where they should be rare, it failed to take a “hard look” at the 2023 Forest Plan’s environmental effects as required by NEPA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332. Because the 2023 Forest Plan allows the agency to create these large patches of early successional habitat inconsistent with NRV, it fails to include plan components ensuring maintenance or restoration of ecological integrity as required by NFMA and the 2012 Planning Rule. 5 U.S.C. § 706(2); 16 U.S.C. § 1604; *see* 36 C.F.R. §§ 219.8(a); 219.7(e)(1)(iii), (iv).

B) The 2023 Forest Plan will not maintain or restore the abundance of age classes within their natural ranges, either at the ecozone or forest-wide scales.

331. Another definitional component of NRV is the percentage of each age class (including early successional habitat, mid- and late-aged forests, and old forests) that should exist in each ecozone, which the Forest Service summed to derive a forest-wide range for each age class.

332. The 2023 Forest Plan contains a desired condition specifying that early successional habitat creation in projects “will not contribute to exceeding the ecozone’s NRV at the forest level.” The 2023 Forest Plan also contains a desired condition that “age class and structural departure from the natural range of variation reduces over time.”

333. However, the 2023 Forest Plan does not include any standards or guidelines to ensure that (1) the NRV for early successional habitat is not exceeded at the ecozone or forest-wide scales or (2) mid- and late-aged forests are not logged to levels below the NRV, in violation of NFMA and the 2012 Planning Rule. 5 U.S.C. § 706(2); 16 U.S.C. § 1604; *see* 36 C.F.R. § 219.

334. Contrary to the 2023 Forest Plan’s desired conditions, the Forest Service’s internal analysis showed that implementation of the 2023 Forest Plan’s objectives would cause the total amount of early successional habitat to exceed NRV, in both particular ecozones and at the forest-wide level. The internal analysis further showed that mid-aged and late-aged forests will be virtually eliminated under the 2023 Forest Plan, increasing departure from the NRV.

335. Because the Forest Service did not disclose the surfeit of early successional habitat or the liquidation of mid- and late-aged forests revealed by its internal analysis, or consider how the loss of mid- and late-aged forest habitats would affect ecosystems and their associated plants and animals, it failed to take a “hard look” at the 2023 Forest Plan’s effects as required by NEPA. 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

336. In addition, because the Forest Service did not reconcile the inconsistency between its logging objectives and the 2023 Forest Plan’s desired conditions, as revealed by its internal analysis, it violated NFMA’s requirement that forest plans be “integrated.” 5 U.S.C. § 706(2); 16 U.S.C. § 1604.

C) The 2023 Forest Plan will not maintain or restore species composition.

337. Another key characteristic of NRV is the appropriate mix of tree and other species within each ecozone.

338. Past logging by the Forest Service on the Forests has caused degradation of species composition.

339. Yet the 2023 Forest Plan does not contain any generally applicable standards or guidelines for the lands considered “suitable” for timber production—where the lion’s share of logging will occur—to ensure that logging will maintain or restore characteristic species composition, in violation of NFMA and the 2012 Planning Rule. 5 U.S.C. § 706(2); 16 U.S.C. § 1604; *see* 36 C.F.R. § 219.

340. The Forest Service's FEIS nevertheless assumes that necessary limitations are in place to ensure that logging will occur only under conditions that will improve species composition.

341. Without standards or guidelines to ensure that necessary limitations on logging are followed, it is reasonably foreseeable that logging in the future will continue to degrade species composition.

342. The Forest Service's analysis therefore also violates NEPA because it failed to take a "hard look" at the 2023 Forest Plan's reasonably foreseeable effects on species composition. 5 U.S.C. § 706(2); 42 U.S.C. § 4332.

PRAYER FOR RELIEF

Plaintiffs respectfully request that the Court:

A. DECLARE that the U.S. Forest Service violated the National Forest Management Act, National Environmental Policy Act, and Administrative Procedure Act in the respects set forth above;

B. VACATE and set aside the 2023 Forest Plan and accompanying Final Environmental Impact Statement and Record of Decision;

C. ENJOIN Defendants from relying on the 2023 Forest Plan until the errors described herein are corrected;

D. AWARD Plaintiffs their reasonable costs, fees, and expenses, including attorney's fees, associated with this litigation; and

E. GRANT Plaintiffs such further and additional relief as the Court may deem just and proper.

Respectfully submitted, this the 27th day of March, 2025.

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