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March 22, 2022

National Forests in North Carolina
ATTN: Objection Coordinator
160 Zillicoa St., Suite A
Asheville, NC 28801

Re: Nantahala and Pisgah National Forests Plan Revision Objection

To Whom it May Concern:

On behalf of the Ruffed Grouse Society & American Woodcock Society (RGS & AWS) and our members, I thank you for the opportunity to object to the *2022 Revised Forest Plan* (the Plan) and *Final Environmental Impact Statement* (FEIS*)* for the Nantahala and Pisgah National Forests (the Forests).

Established in 1961, the Ruffed Grouse Society (RGS) is North America's foremost conservation organization dedicated to creating healthy forests, abundant wildlife, and promoting a conservation ethic. Together with the American Woodcock Society (AWS), established in 2014, RGS & AWS work with landowners and government agencies to develop critical wildlife habitat utilizing scientific management practices.

According to the Association of Fish and Wildlife Agencies' Eastern Grouse Working Group report in December 2020, ruffed grouse populations have declined 71% since 1989 in the Southern Appalachians (Eastern Grouse Working Group, 2020). The report identified that, "Loss of young forests across the landscape is the primary driver of this decline." The species is identified as a Species of Greatest Conservation Need in North Carolina's State Wildlife Action Plan (North Carolina Wildlife Resources Commission, 2015).

Ruffed grouse are a reliable indicator for healthy, diverse forest ecosystems (Norman et al., 2004). The lack of forest age-class and structural diversity is a driver of decline for multiple at-risk wildlife species in the region, including species traditionally thought of as "disturbance-dependent" and "mature forest obligates" that both benefit from a biologically significant mix of young, open, and late-successional forest conditions across the landscape (Bakermans et al., 2011; Golden-Winged Warbler Working Group, 2013; Jacobs & Warburton, 2016; Lambert et al., 2017; Wildlife Management Institute, 2008; Wood et al., 2013).

Urgent action is needed at the landscape scale, above and beyond localized habitat improvement efforts, to halt the decline in ruffed grouse and other forest wildlife in western North Carolina before it is too late.

The best available science suggests that maintaining 8-14% early successional habitat across the Nantahala and Pisgah National Forests would optimize for bird diversity, including "young forest obligates" and "mature forest obligates" (Jacobs & Warburton, 2016). We recognize that these forests are not managed solely for bird diversity and that many other interests must be considered in a multiple use forest. However, to ensure viable wildlife

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populations are maintained long-term, it is essential that the Forest Plan establishes a pathway to maintain early successional habitat conditions somewhere within the 8-14% range.

On June 29, 2020, RGS & AWS submitted comments to the Draft Forest Plan. The objections below are based on previously submitted comments.

1. **Issue:** In Appendix D of the FEIS, the Forests' definition of a young forest patch is anything greater than or equal to 0.5 acres (USDA Forest Service, 2022a, p. D-13). However, 0.5 acres is less than the 1-acre minimum size used by the Forest Service's Resources Planning Act Assessment for defining a forest, as stated in Appendix D of the FEIS. **Therefore, this definition is inconsistent with the Forest Service's policies.** Furthermore, the evidence suggests that small young forest patches (<1-2 acres) do not provide the same habitat as large young forest patches (>1-2 acres) for ruffed grouse and other forest wildlife (Fearer & Stauffer, 2003, 2004; Jones & Harper, 2004). The FEIS did not consider the quantity, arrangement, interspersion, and juxtaposition of young forest habitat in terms of its utility to wildlife in the Spectrum model. For example, a 0.5- to 1-acre patch that is isolated among a completely closed-canopy forest will not provide the same habitat as a clustering of patches. **Therefore, the model overpredicts the amount of functional young forest that will be created.** Because young forest habitat suitability was not analyzed properly in the Spectrum model, **the ESE for demand wildlife species that depend on young forest is likely wrong and likely overpredicts stable population trends.** In reality, the Plan will likely perpetuate current declines with given assumptions.

   a. **Requested Relief:**
      i. Adjust the Spectrum model to only include young forest patches greater than 1-acre in size as contributing towards young forest objectives.
      ii. Include an analysis of functional young forest habitat in the Spectrum model. This should include at least an assessment of interspersion and juxtaposition.
      iii. Adjust the ESE for wildlife species that depend on young forest conditions to reflect updates in the Spectrum model.
      iv. Adjust the monitoring and evaluation plan to only include these *functional* young forest patches.
   b. **Consistency with RGS & AWS comments:**
      i. In our 2020 comments, RGS & AWS commented on the Forest Service's canopy gap analysis and advocated for larger young forest patch sizes (Jones & Biemiller, 2020, p. 7-8). We are pleased to see that the Forest Service adopted a 0.5-acre minimum young forest patch size, but without an assessment of habitat quantity, arrangement, interspersion, and juxtaposition, we remain concerned that the model remains inaccurate.

2. **Issue:** The NRV model does not appear to have included historic anthropogenic disturbance (Native American land-use), including frequent burning, swidden agriculture, clearing forest land for cultivation and settlement, and old field abandonment. Appendix D of the FEIS states, "The 1,000-year timeframe used in the NRV model for the Nantahala and Pisgah NFs provides insights for how ecosystems and species evolved over time. During that timeframe, human impacts on the environment were less evident than today." (USDA Forest Service, 2022a, p. D-15). Also, the NRV model did not consider non-human natural disturbances caused by keystone wildlife species that are now extinct or extirpated, including eastern bison, elk, and passenger pigeons. Therefore, **the NRV model likely underestimates the amount**

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of historic young and open forest and inflates the role of current natural disturbances in providing desired conditions. It discounts the role of *people* in maintaining desired forest structural conditions.

In addition, the LANDFIRE state-and-transition simulation models that the NRV model was based on did not include spatial or temporal variability and were based on average annual probabilities at the scale of the simulation cell (Blankenship et al., 2021, p. 17). In the Plan's NRV model, disturbance gap sizes were provided as ranges that varied in size depending on ecozone (USDA Forest Service, 2022b, p. 54-64). Therefore, it would be inappropriate to apply any additional spatially explicit constraints to desired conditions for wildlife habitat across terrestrial ecozones, including young forests, open forests, interior forests, or mature forests.

    a. **Requested Relief:**
        i. **Our intent is to support the NRV model, but also to improve the model by identifying things that may have been missed so as to build more support in its utility moving forward**. To achieve this, we recommend that the Forest Service adjust the NRV model to include pre-European anthropogenic disturbance from Native Americans and extinct or extirpated wildlife species that contributed to the Forest's historic range of variation based on best available science (Greenberg & Collins, 2016). Specifically, the NRV model should include disturbance created from passenger pigeon, beaver, elk, and bison, and anthropogenic disturbance created from Native American land-use such as land clearing for settlements, traditional agricultural systems, frequent fire, wood utilization for structures and fuel, and field abandonment, which affected forest composition and structure near settlements.
        ii. Update the desired conditions of forest structural conditions across ecozones based on updates to the NRV model.
        iii. Ensure that the NRV modeling is used to inform desired conditions in the Plan, but that forestwide targets or objectives are not developed that spatially constrain active forest management to attain desired conditions.

    b. **Consistency with RGS & AWS comments:**
        i. In our 2020 comments, RGS & AWS supported the NRV model approach but identified that the model has shortfalls and establishes a target acreage range for young forest habitat that is low compared to the range used by wildlife managers and supported by the best available science (Jones & Biemiller, 2020, p. 7). After reviewing the Revised Forest Plan and participating in the Forest Service's modeling presentation, we discovered that the NRV model did not include certain significant disturbance regimes in the assessment of pre-Euro-American conditions. This is new information that warrants an objection.

3. **Issue:** The Spectrum model considered human-induced wildfires as a contributing factor (74% wildfire occurrence) towards the new natural disturbance prescription for young forest patch creation in Appendix D of the FEIS (USDA Forest Service, 2022a, p. D-14). This is inconsistent with the handling of anthropogenic disturbance in the NRV model. **It is inappropriate to include anthropogenic disturbance in one model but not the other**. Also, assuming that recent human-induced wildfire will

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continue into the future is not accurate because it assumes a continuity of social behavior without considering other social variables.

    a. **Requested relief:**
        i. Adjust the NRV model to include pre-European anthropogenic disturbance from Native Americans and extinct or extirpated wildlife species that contributed to the Forest's historic range of variation based on best available science.
        ii. Consult social scientist experts regarding assumptions in human behavior as they relate to human-induced wildfire events and revise the "natural disturbance young forest patch" prescription in the Spectrum model based on input that considers demographic changes, economic development, education levels, and other social factors.

    b. **Consistency with RGS & AWS comments:**
        i. In our 2020 comments, RGS & AWS supported the NRV model approach but identified that the model has shortfalls and establishes a target acreage range for young forest habitat that is low compared to the range used by wildlife managers and supported by the best available science (Jones & Biemiller, 2020, p. 7). After reviewing the Revised Forest Plan and participating in the Forest Service's modeling presentation, we identified inconsistencies between the NRV and Spectrum models that warrant an objection.

4. **Issue:** Table 42 in the FEIS states a range for the amount of old forest closed canopy seral states from passive forest management over time as 330,785 acres for Tier 2 of Alternative E and 554,227 acres for Tier 1 of Alternative E (USDA Forest Service, 2022b, p. 3-125). However, Table 45 states that 342,100 acres were modeled towards the passive management prescription for Tier 2 of Alternative E and Table 46 states that 707,300 acres were modeled towards the passive management prescription for Tier 1 of Alternative E (USDA Forest Service, 2022b, p. 3-127). **These numbers appear to be inconsistent.**

    a. **Requested relief:**
        i. Clarify why these numbers are not consistent across tables. For example, if there are 707,300 acres that will primarily be guided by passive management approaches, why is only 553,227 acres of old forest closed canopy seral states predicted in the model over 200 years? Shouldn't 200 years be enough to move that entire landscape towards an old forest closed canopy seral state? If 707,300 acres are developing towards old forest closed canopy seral state, this far exceeds the desired conditions for old forests established in the NRV model.

    b. **Consistency with RGS & AWS comments:**
        i. In our 2020 comments, RGS & AWS commented on the estimates for old growth forest conditions modeled in the Draft Environmental Impact Statement and expressed our concerns about exceeding desired conditions for old growth (Jones & Biemiller, 2020, p. 16). Based on new information in the FEIS, we remain concerned about the amount of old forest closed canopy conditions that will be maintained on the landscape long-term.

5. **Issue:** The 265,385 acres allocated towards the old growth base network is higher than the 226,015 acres allocated in the Alternative D that RGS & AWS supported in our comments (Jones & Biemiller, 2020, p.

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19). Given the large amount of forest land already allocated towards passive management prescriptions (707,300 acres), **we are concerned the Forest Service will exceed desired conditions for old forest established in the NRV model** (USDA Forest Service, 2022b, p. 3-127).

a. **Requested relief:**
   i. We recommend the USFS decrease their old growth network to 255k at the Plan-level. While it's higher than our previous recommendations, this is an amount that we can live with. To achieve this, the Forest Service should include known old-growth and remove areas that don't qualify as high-quality old-growth from the existing old-growth base network; or adopt a cap-and-trade system for dealing with old-growth on the Project-level without exceeding 255k acres total.

b. **Consistency with RGS & AWS comments:**
   i. In our 2020 comments, RGS & AWS recommended the 226,015-acre old growth network proposed in Alternative D. However, we can live with 255,000 acres with a cap-and-trade system adopted.

6. The Spectrum model appears to falsely assume that open forest woodlands will be created and maintained in certain places in-perpetuity (USDA Forest Service, 2022b, p. 3-128 to 3-132). This assumption is inconsistent with the multiple-use goals of the USDA Forest Service. It's reasonable to think that open forest conditions will be created and maintained in-perpetuity in some places, namely in Management Areas not suited for timber production (e.g., Backcountry). However, open forest conditions will be created temporarily in other places as part of long-term silvicultural rotations and timber management (e.g., Matrix). This could include the establishment cutting of a shelterwood treatment or the application of a shelterwood-burn technique to establish and release advance oak regeneration. In this case, once advance oak regeneration is established the overstory will be removed and the stand will transition from an "open forest" to a "young forest" seral class, and open forest conditions will be maintained across the landscape as part of a *shifting mosaic* rather than in one location in-perpetuity.

a. **Requested relief:**
   i. The Plan needs to capture that open forest conditions will be created and maintained differently across the landscape. The goal should not always be woodland structural maintenance, and many stands that receive thinning and burning might be harvested at some point in the future.
   ii. The Spectrum model should incorporate multiple trajectories towards achieving open forest conditions long-term. For example, 1) open forest created as part of a shifting mosaic of long-term silvicultural rotations in Matrix and 2) open forest created and maintained as woodlands in Backcountry. This should include an option for timber harvesting in prescribed burn units.

b. **Consistency with RGS & AWS comments:**
   i. In our 2020 comments, RGS & AWS recommended a better definition for open forest woodlands and a better description of the Forest Service's strategy to attain desired conditions for open forest woodlands (Jones & Biemiller, 2020, p. 8-9). Our objection

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builds off this comment and seeks more clarification towards the definition of open forest woodlands, clarification on how those acres will be monitored, and increased flexibility with how open forest conditions are achieved over time.

7. **Issue:** In the Spectrum model, group selection treatments were included as contributing towards young forest conditions (USDA Forest Service, 2022a, p. D-46). The definition of a group selection usually includes small gap creation (less than 2x mature tree heights). As such, if implemented in small gaps the treatment would create within stand age-class diversity not landscape age-class diversity. Rather, it would accelerate the successional trajectory of the current stands rather than regenerating them.

   a. **Requested relief:**
      i. Group selection treatments should not be included as contributing towards young forest conditions in the Plan unless the quantity, arrangement, interspersion, and juxtaposition of patches is considered and the treatment is implemented as a patch selection, wherein there's a minimum size of 1-acre per young forest patch.

   b. **Consistency with RGS & AWS comments:**
      i. In our 2020 comments, RGS & AWS commented on the Forest Service's canopy gap analysis and advocated for a larger young forest patch size (Jones & Biemiller, 2020, p. 7-8). We are pleased to see that the Forest Service adopted a 0.5-acre minimum young forest patch size, but without an assessment of habitat quantity, arrangement, interspersion, and juxtaposition, we remain concerned that the model remains inaccurate. The treatment of gaps or patches created through group selection treatments should be consistent with the treatment of gaps or patches created *naturally* across the Forests.

8. **Issue:** The FEIS states that, "In Alternative E, there is more emphasis on creating open canopy woodland states first, and then young forests, in the Spectrum model." (USDA Forest Service, 2022b, p. 3-122). If this is assumed in the model, is it true that active forest management will be focused on creating open forests first and then young forests second sequentially during implementation? The Plan should not prioritize one desired condition for underrepresented forest structural conditions over another. Many forest wildlife species that are rapidly declining depend on young forest conditions and their rates or decline might exceed the Forests' planning goals for creating young forest.

   a. **Requested relief:**
      i. Young forest should be prioritized in the first 10 years of implementation as much as any other underrepresented forest condition. Remove any sequential ranking in the Plan and move forward with all underrepresented forest conditions simultaneously, working with partners that specialize in the attainment of different forest conditions.

   b. **Consistency with RGS & AWS comments:**
      i. In our 2020 comments, RGS & AWS highlighted the urgent need of young forest creation across the landscape (Jones & Biemiller, 2020, p. 1). This objection aligns with our concern relating to the urgency of young forest habitat and the rates of decline of forest wildlife that depend on those conditions.

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9. **Issue:** The Plan's Integrated Ecosystem and Wildlife Habitat Objectives for thin and burn treatments to attain open forest woodland conditions are very low. In fact, the Spectrum model in the FEIS predicts that only 85,635 acres (Tier 1) to 187,450 acres (Tier 2) will be restored and maintained as open forest woodlands over 200 years, whereas desired conditions based on the NRV model are to maintain 360,000 acres to 480,000 acres long-term (USDA Forest Service, 2022b, p. 3-128 to 3-129). Therefore, desired conditions for open forest woodland conditions will never be attained. At the same time, the Plan assumes that more "thin and burn" treatments will be applied noncommercially than through commercial timber harvesting, apparently because of poor site quality and remote locations (USDA Forest Service, 2022b, p. 3-543). This is a missed opportunity for low-grade forest product markets to support a cost-effective efficient means to achieve desired conditions.

    There is a robust wood products market with well-developed logging and wood procurement systems that are designed to support the harvesting of small diameter pulpwood. The small diameter pulpwood consumption from local wood markets located near the geographic center of the Forests and its immediate periphery is currently more than 2 million tons annually. These wood products markets have been in existence for over 115 years and have well developed harvesting, procurement, and supply chain systems able to accommodate a robust increase in silvicultural vegetation management treatments to reach higher levels of open forest woodland conditions.

    a. **Requested relief:**
        i.   The Plan should increase the objectives for thin and burn treatments to attain open forest woodland conditions, probably by quite a lot, and increase the amount of thin and burn treatments that can be completed with commercial timber harvesting.
        ii. The Plan should increase commercial wood utilization from existing forest product markets (pulpwood) and emerging forest product markets (woody biomass) for small-diameter, low-grade wood products.
        iii. The Plan should make it clear that the USFS will work with partners to attain higher levels of open forest conditions through commercial and noncommercial treatments by engaging in Stewardship Agreements and other partner agreements (Challenge Cost-Share or Participating).

    b. **Consistency with RGS & AWS comments:**
        i.   In our 2020 comments, RGS & AWS supported the Draft Forest Plan's desired condition of 360,000 to 480,000 acres in open forest conditions and recommended a Tier 2 minimum objective of 31,000 new acres per decade managed to make progress towards achieving desired conditions (Jones & Biemiller, 2020, p. 8). The Revised Forest Plan and FEIS falls short on making meaningful progress.

10. **Issue:** The FEIS provides inconsistent information regarding timber volume outputs as a result of Alternative E.

    In one section, the FEIS states that "For Tier 1, Alternative E values are around one and a half times greater than Alternative A, yet just over 1 MMCF lower than the other action alternatives. Tier 2 values

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are still more than double Alternative E tier 1 outputs, close to or exceeding three times the values for Alternative A (PWSQ and PTSQ respectively), and approximately 2 to 2.5 MMCF lower than the other action alternatives." (USDA Forest Service, 2022b, p. 3-537).

In another section, the FEIS states that "In Tier 2, Alternative E produces the most volume followed by Alternative B and then Alternative D and C. The difference between the alternatives in Tier 2 becomes more apparent as the harvest levels are applied to more acres and management area differences become more relevant." (USDA Forest Service, 2022b, p. 3-545).

These statements seem to contradict each other. Will Alternative E result in more timber volume outputs and PWSQ/PTSQ or less?

In addition to increasing noncommercial treatments to attain open forest woodland conditions, the Plan also appears to assume that more mesic forests will be managed with uneven-aged management instead of even-aged management. The Project-level prescription decisions should not be assumed at the Plan-level to apply limitations to treatment types or constrain timber sale volumes. Even-aged treatments need to be one of the tools in the toolbox across ecozones and are essential for providing high-quality young forest habitat in mesic forests that wildlife utilize, including ruffed grouse.

    a. **Requested relief:**
        i. The FEIS should clarify the timber sale volume outputs from Alternative E. If volume outputs are lower than Alternatives B, C, and D, as it appears in sections of the FEIS, the FEIS should increase timber sale volume outputs to at least be consistent with B, C, and D, if not higher. The Plan should not assume that more mesic forests will be managed through uneven-aged treatments instead of even-aged treatments and the Plan should not constrain treatments in mesic forests. Even-aged treatments can be appropriate to help achieve desired conditions across all ecozones.
        ii. Commercial timber harvesting is the most cost-effective means to create young and open forest desired conditions. Therefore, commercial timber harvesting should be included as the primary means to create young and open forest conditions.

    b. **Consistency with RGS & AWS comments:**
        i. In our 2020 comments, RGS & AWS emphasized commercial timber harvesting as the most cost-effective means of achieving desired conditions for young and open forests on the Forests, and recommended 2,700 to 4,200 acres of annual regeneration timber harvests as a baseline (Jones & Biemiller, 2020, p. 12-14). The Plan appears to fall short on our recommendations.

11. **Issue:** Ephemeral stream protection in the Plan should follow NC Forestry BMPs or not exceed the FSC Forest Management Standard for the Appalachia Region (USDA Forest Service, 2022c, p. 47). NC Forestry BMPs adequately protect water quality and the BMPs allow managers to improve/restore composition and structure of vegetation within the ephemeral drainage as needed while protecting water quality (Water Resources Branch North Carolina Forest Service, 2018). Any additional restrictions on

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operating around ephemeral streams would make restoration of these areas prohibitive and make forest management in the mountains prohibitive in general.

    a. **Requested relief:**

        i. To ensure that adequate BMPs are implemented, while also creating a pathway towards forest certification, replace the Plan language with the Appalachia Region Forest Stewardship Council SMZs. Adopting the FCS standards would be a more elegant solution to handling ephemeral streams and create a pathway for FSC certification. The Plan Could also include very basic setbacks for channeled ephemerals based on the West Virginia BMP manual.

    b. **Consistency with RGS & AWS comments:**

        i. In our 2020 comments, RGS & AWS encouraged the Forest Service to consider certification by the Forest Stewardship Council (FSC), as sustainably certified wood is in high demand among regional mills and FSC certification could help attract competitive bids to commercial timber sales (Jones & Biemiller, 2020, p. 13).

RGS & AWS commends the Forest Service's efforts to increase the pace and scale of active forest management to benefit healthy forests and abundant wildlife. There's a lot about the Revised Forest Plan that we support. The 4-9% young forest conditions modeled in the FEIS are lower than the 8-14% young forest conditions that we recommended. However, if active forest management is implemented at Tier 2 objective levels of young forest creation, we will fall within the recommended range. When achieved, 9% young forest conditions will create a biologically significant positive impact on ruffed grouse and other forest wildlife. As such, we strongly recommend that the Forest Service pursue Stewardship Agreements to collaborate with partners to implement commercial timber harvests and noncommercial service work that contributes towards Tier 2 habitat objectives in a truly additive way.

We appreciate the opportunity to object.

Sincerely,

Nick Biemiller, Forest Conservation Director

Southern Appalachian Region

Ruffed Grouse Society & American Woodcock Society

Lead Objector

For more information visit the RGS & AWS website at RuffedGrouseSociety.org. Follow us on Facebook and Instagram @RuffedGrouseSociety.

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Additional Signatories in Support of RGS & AWS's Objection

Luke Weingarten and Tyler Ross, North Carolina Backcountry Hunters and Anglers

David Whitmire, Fish and Wildlife Conservation Council

Orrin Goure, Columbia Forest Products

Rob Elliott, Evergreen Packaging

John Hatcher, North Carolina Forestry Association

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