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Nantahala and Pisgah National Forests



Final Environmental Impact Statement

for the
Land Management Plan

Appendix A. Response to Comments

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**Final Environmental Impact Statement
Nantahala and Pisgah National Forests
Land Management Plan**

Appendix A: Response to Comments

Prepared by:

The EIS Plan Revision Team, shown in FEIS Chapter 4

For Information Contact:

Michelle Aldridge, Project Leader

160 Zillicoa Street, Suite A

Asheville, NC 28801

Phone: 828-257-4200

<http://www.fs.usda.gov/goto/nfsnc/nprevision>

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Introduction

This appendix describes the process used to analyze the comments received during the public comment period for the draft environmental impact statement (DEIS) and proposed land management plan (draft plan) for the Nantahala and Pisgah NFs.

November 2022: Updates were made to this Appendix when instructed in the pre-decisional administrative review process, however this Appendix should not be considered the response to issues raised in objections. For information on how topics were landed as a result of the objection review, see “Final Response to Objection Issues and Instructions.” Instead, this Appendix serves as the response to comments raised in the public comment period between the draft and final EIS. As a result, it may not contain the most updated information for each topic.

The DEIS comment period opened on February 14, 2020, and concluded on June 29, 2020. The 90-day comment period was extended 45 days due to impacts of Covid-19 on the public engagement process. After the draft plan and DEIS were released, one public meeting was held on March 10, 2020. The remaining in-person public meetings were cancelled in response to the Covid-19 pandemic. In lieu of public meetings, four teleconference public question and answer calls were held in May and June of 2020 to answer questions about the draft plan and DEIS.

Several methods were used to inform the public about the draft plan and DEIS. These included direct mailings to interested and potentially affected individuals and organizations, news releases, newsletters, media interviews, one open house, contacts with other Federal and local agencies, publication of the Notice of Availability in the Federal Register, and website posting at www.fs.usda.gov/goto/nfsnc/nprevision. This appendix includes either direct comments submitted by individuals, summarized comments, or representative comments, and the subsequent agency responses to the substantive comments received.

Content Analysis Process

The content analysis of comments was conducted using a systematic process of reading, coding, and summarizing all comments that were submitted. This process ensured that every comment was read, analyzed, and considered. The most helpful comments were those that were unique and specifically related to the plan and analysis in the DEIS. All comment letters were entered in the Forest Service’s Content Analysis and Response Application (CARA) database. Each unique comment was numbered sequentially and coded by topic in CARA. Similar comments were grouped into concern statements that capture the intent of the commenter(s), and nearly identical comments were combined.

While most comments are not quoted in this appendix exactly as written by commenters, each comment was considered individually. Comments are followed by the responses prepared by the Nantahala and Pisgah planning team. The interdisciplinary team prepared responses for each comment based on its merits, regardless of the source or whether the comment was expressed by one person or by many. Comments and responses are generally arranged according to how the resources are presented in the Forest Plan and EIS.

It is important to recognize that the consideration of public comments is not a process in which the outcome is determined by the majority opinion. All comments have been treated equally. They are not weighted by organizational affiliation or status of respondents, and it does not matter if an idea was

expressed by thousands of people or a single person. Emphasis is placed on the content of a comment rather than who wrote it or the number of people who agree with it. Although the relative depth of feeling and interest among the public can serve to provide a general context for decision-making, it is the appropriateness, specificity, and factual accuracy of comment content that serves to provide the basis for modifications to planning documents and decisions. This report attempts to provide fair representation of the wide range of views submitted. In considering these views, it is important for citizens and decision makers to understand that this process makes no attempt to treat input as if it were a vote. Instead, the content analysis process ensures that every comment is considered at some point in the decision process. Every substantive comment and suggestion have value, whether expressed by one respondent or many.

This appendix documents the Forest Service responses to the substantive comments, which have been addressed, as prescribed in 40 CFR 1503.4, in the following ways:

- modifying the forest plan (Alternative E);
- developing or analyzing alternatives not given detailed consideration in the draft EIS;
- supplementing, improving, or modifying the analysis documented in the EIS;
- making factual corrections; and/or
- explaining why the comments need no further agency response.

Public Comment Overview

During the 135-day comment period, approximately 9,730 letters were received. Several letter writing campaigns resulted in submission of an additional 3,840 letters, many of which were duplicates.

- Ninety-five percent of comments were received electronically, either through the Content Analysis and Response Application (CARA), or a Forest Service e-mail inbox. The remaining five percent were received via postal mail.
- The agency received comments from Federal and state agencies, local governments, Native American Tribes, collaborative groups, non-profit organizations, and interested individuals.
- Approximately ninety percent of comment letters submitted were form letters or form plus (form letters with additional unique comments).

Individual letters are not included in this report but can be viewed online in the public reading room for this project at: <https://cara.ecosystem-management.org/Public/ReadingRoom?Project=43545>. Duplicate letters and comment letters that include personal identifiable information are not published in the public reading room.

Considering Different Types of Comments (Substantive/Non-substantive)

Agencies have a responsibility under the NEPA to first “assess and consider comments both individually and collectively” and then to “respond... stating its response in the final statement.”

In completing the content analysis, comments were identified that fell outside the scope of the forest plan revision. Comments outside the scope do not require a response. Generally, the types of comments that were considered outside the scope include those that:

- Do not address the purpose, need, or goals of the Forest Plan;

- Address concerns that are already decided by Federal law or national policy;
- Suggest an action not appropriate for the forest plan decision (such as site-specific decisions to construct new roads, campgrounds or facilities, to offer special use permits, or the sale of timber resources);
- Propose untenable restrictions on management of the Forest or conflict with approved plans not being revised in the Forest Plan revision process; and/or
- Did not consider reasonable and foreseeable negative consequences.

Once comments were identified as being within the scope, they were identified as being substantive or not. Based on the Council of Environmental Quality's regulations, a substantive comment is one that:

- Questions, with a reasonable basis, the accuracy of the information in the environmental impact statement;
- Questions, with a reasonable basis, the adequacy of environmental analysis as presented;
- Presents reasonable alternatives other than those presented in the DEIS that meet the purpose and need of the proposed action and address significant issues; and
- Causes changes or revisions in the proposal.

Non-substantive comments, or concerns identified from them, include those that simply state a position in favor of or against an alternative, merely agree or disagree with Forest Service policy, or otherwise express an unsupported personal preference or opinion. While a response is only required for substantive comments, this appendix includes general responses to many nonsubstantive comments to acknowledge that the Forest Service has considered all public concerns in making a final decision. Responses to substantive concerns are typically more extensive, complete, and offer an explanation of why or why not the concern may have resulted in changes to the Forest Plan or analysis. If several concerns were similar, they have been grouped for response purposes. Public comments that identified editorial or other errors in the presentation of information in the forest plan and DEIS were used to revise text and make corrections for the FEIS.

CLIMATE AND CARBON

Comment: Carbon storage and carbon sequestration are critically important ecosystem services that must be prioritized in forest planning. The Plan and DEIS are dismissive of the ability of both the NPNF and National Forests’ overall ability to store carbon to contribute towards climate mitigation. Vegetation plays a critical role in carbon sequestration and regulating air quality.

The Forest Service should place greater emphasis on carbon sequestration by retaining old trees and protecting intact forests through a reduction in timber harvest and an increase in harvest rotation lengths. Additionally, the Forest should provide a full accounting of the forest’s role in sequestering carbon, and an assessment of the cumulative impacts of management and disturbance trends across the National Forest System.

Response: The Nantahala and Pisgah NFs will be managed and protected as National Forests for future generations. The Plan's climate change section addresses the forests’ role in climate change mitigation and addresses adaptive management to sustain forest climate resiliency into the future. These topics are also addressed in the Climate and Carbon section of the EIS analysis in Chapter 3.

The EIS analysis demonstrates that over the long term, proposed management activities generally maintain and improve forest health, and are likely to increase carbon storage and reduce emissions on the Nantahala and Pisgah NFs. The EIS carbon section addresses the impact of timber harvest on climate change, describing how the potential direct and indirect effects of active management are negligible. Length of rotation does influence forest productivity and is discussed in the EIS carbon analysis, including the effects of forest succession on carbon. The agency used the best available science to consider forest management and natural disturbance effects on carbon.

The EIS recognizes long term carbon storage as an ecosystem service provided by the forest in the Social and Economic Resources: Benefits to People: Ecosystems Services section. The definition of ecosystem services provided as a footnote in the Plan's climate change section has been modified to explicitly identify carbon sequestration as a regulating ecosystem service.

The Forest Plan includes forestwide direction on carbon sequestration and air resources. The plan contains direction related to managing old growth forests, and managing for climate change, emphasizing adaptive management and ecosystem resiliency. Sustaining a healthy forest over time is a core tenet of the revised forest plan.

The plan outlines a long-term planning process for protecting and enhancing the development of old growth characteristics over time and expands the designated old growth network that represents all ecozones and elevations dispersed across the forest. In designated old growth patches, vegetation manipulation is only allowed to enhance old growth values and characteristics.

Plan direction in the terrestrial ecosystem section clarifies that the primary purpose of timber management is to support ecosystem goals and that timber production is not a primary purpose for projects.

Since even the maximum potential management levels discussed in the plan alternatives would have negligible impacts on forest carbon stocks, a quantitative analysis of carbon stocks is not warranted. This assessment is based on a national framework for assessing carbon stocks and fluxes on NFS lands, the Resources Planning Act Assessment, 2020, however accounting for the cumulative impact of management and disturbance trends across the National Forest System is outside of the scope of this land management plan revision.

Sustaining and increasing carbon storage and sequestration throughout the National Forest System to mitigate climate change is beyond the scope of this forest plan revision effort.

Comment: The Forest Service undervalues the long-term carbon stored in intact watersheds and old-growth forests compared to logged areas and understates the cumulative emissions from logging and road building.

Response: Chapter 3 of the EIS addresses the carbon stocks on the NFs of North Carolina, including the impacts of timber harvesting and prescribed fire on carbon stores. Tier 2 objectives would increase forest resiliency which would improve the Forests' ability to uptake and store carbon, potentially reducing future carbon emissions. All plan alternatives seek to improve watersheds and develop old-growth forest conditions.

The EIS carbon section has adequately considered the influence of carbon, from both natural disturbances and active management, to the degree that programmatic plan components and management approaches can or should incorporate concepts related to the issue while using best available science. Because the maximum potential management levels presented in the plan alternatives would have negligible impacts on forest carbon stocks, a quantitative analysis of carbon stocks is not warranted. Conducting a cumulative impact analysis across National Forest system lands is outside of the planning scope.

The EIS does not conflate carbon stocks and fluxes, as both are addressed using data sources and methods that are accurate, relevant, and reliable for the purpose. A full life cycle analysis is provided to the extent it is feasible to do so, which is limited by rule of reason with respect to the magnitude of effects.

The EIS has adequately accounted for potential climate change impacts, to the degree that is appropriate for a programmatic forest plan. The analysis uses data sources and methods that are accurate, relevant, and reliable for the purpose and a full explanation of the best available science is provided in EIS Appendix B. A comprehensive literature and modeling review of potential climate change effects and management options was completed using the FS Template for Assessing Climate Change Impacts and Management Options (TACCIMO) and incorporated into the assessment phase of the plan revision (see Appendix B). These findings were brought forward into the plan and EIS, which also inform the plan monitoring program.

No applicable regulatory or legal requirement exist for management of forest carbon or greenhouse gas emissions. The 2012 Planning Rule and Final Forest Service Directives require an assessment of baseline carbon stocks. There is no requirement for the forest plan to include downscaled carbon projections under different emission scenarios. The agency is not required to perform a carbon life cycle analysis.

Comment: The Forest Service should account for increases in precipitation due to climate change by providing more erosion control measures.

Response: The Forest Plan includes a forest-wide section on climate change which includes management approaches to address climatic changes that may be incorporated into projects and activities. This acknowledges possible changes in precipitation patterns and outlines potential mitigation strategies including erosion control and use of appropriately sized culverts and stream crossings.

Comment: Commenters emphasize the importance of using the Best Available Scientific Information (BASI) in plan components and provide guidance regarding increasing forests' climate resiliency including climate strategies in an adaptive management program. Comments requested clarification of terminology, incorporation of national-level Forest Service documents into the final plan, additional inclusion of climate change EIS analyses into plan components, analysis of the carbon impacts of the management alternatives, and a cumulative impact assessment in regard to climate change.

Response: Managing for resilient landscapes in the face of change is integrated into plan direction for relevant resources throughout the plan and the plan monitoring program. Both the forest plan and EIS were written using the latest agency guidance on integrating climate change into land management planning.

The carbon analysis presented in the EIS is based on best available science to consider forest management effects on carbon (see Appendix B). The analysis indicates that the carbon emissions from timber harvests are minor in the context of natural processes and global emissions. The EIS analysis demonstrates that over the long term, proposed activities are likely to increase carbon storage and reduce emissions (EIS Chapter 3). Cumulative impacts of carbon and climate change analysis are presented in the EIS, Chapter 3.

The EIS analysis is conducted at this scale because considering cumulative effects of climate change on the forests requires broader bounds of time and space to account for the additive and synergistic effects of a changing climate. Conducting an analysis at other scales is beyond the requirements of the planning process.

Comment: Commenter's requested stronger language in the background of the Plan's Climate Change section to support Desired Conditions and Management Approaches. Climate elements addressed in the DEIS were omitted from the climate change section of the Plan, such as the uncertainty in the degree of climate change and its effects, including changes in growing season.

The Plan should refer to the 2012 Planning Rule to provide reason behind why the Nantahala and Pisgah NFs Plan must address climate change. Citations and references to relevant agency climate assessments and resources should be included in the final plan.

Response: The background of the climate change section of the plan was modified to clarify the agency's stance and the Nantahala and Pisgah NFs' role in addressing climate change, including adapting resource management to account for changing conditions. The background section was also modified to acknowledge the uncertainty in the degree of climate change impacts on the forests' ecosystems.

Chapter 1 of the Forest Plan states that the 2012 Planning Rule influences the content of the Plan. There is no need to reference the Rule further in the climate change section. The Forest has cited and incorporated information from several Forest Service climate change assessments and guidance documents in the EIS.

Comment: Commenters requested additional desired conditions, including establishment of ideal habitats at high altitudes to assist species, such as the ruffed grouse, in adapting to climate change.

Commenters requested additional language in climate change desired conditions including managing natural forest regeneration for desired species composition in the face of climate change, maintaining biological legacies to enhance the climate resiliency of old growth forests, managing for soil quality and functional nutrient cycling, connectivity for species migration and adaptation, and maximizing diversity and connectivity to promote climate resiliency.

The plan should discuss how landscape patches may be impacted by increased amounts of disturbance caused by climate change.

Response: Language has been added to the plan's Climate Change Management Approaches to emphasize the need for restoration projects that facilitate species migration and adaptation. In addition, the plan promotes activities that support habitat enhancement for species susceptible to the effects of climate change.

In the final plan, Wildlife Habitat Diversity management approaches were added to the terrestrial ecosystem objectives to prioritize young forest treatments in units above 2,500 feet in elevation to enhance habitat for ruffed grouse, golden-winged warblers and other species to contribute to healthy populations on the forest.

The Terrestrial Ecosystems section of the plan includes Key Characteristics of Ecozones on the forest. A guideline in the Timber Management Practices section of the plan states, "When regenerating forest stands, regeneration should be native tree species that commonly occur naturally on similar sites within that community or ecozone and that are expected to be resilient to climatic changes."

The Soil section of the Forest Plan addresses maintenance and improvement of forest soil nutrient cycling, as well as soil physical, chemical, and biological properties. The plan's geological resources section also addresses the importance of sustaining geologic diversity in a changing climate.

The Nature Conservancy's Resilience product (Anderson et al.) was considered in the EIS. In addition, landscape patterns are one of the four pillars of ecological integrity addressed in plan components.

Forest plan components in the terrestrial ecosystems and climate change sections of the plan address the need to maintain a landscape that has high ecological integrity and is resilient in the face of changing conditions.

Comment: The Plan should address monitoring and maintaining and enhancing healthy freshwater base flows in the face of climate impacts.

Include the work related to stream base flows done by the agency's Coweeta Hydrologic Laboratory, the Eastern Forest Environmental Threat Assessment Center, the Southern Research Station, and NC State University.

Response: The Climate Change Management Approaches have been updated to "prepare for intense storms and fluctuations in base flow" to acknowledge that climate change may alter stream base flows. The USGS is the agency that is tasked with monitoring long-term trends in stream flow. Through the agency's collaboration with USGS, the Forest Service can use recent data to help address climate change through broad scale monitoring (Monitoring Questions, Category 6).

The Forests work in close partnership with Coweeta Hydrologic Lab where studies are on-going to help management address concerns with climate change and water quality and quantity. A monitoring question was added in the Final Plan to consider trends in forest streamflow quantity.

Comment: The Plan and DEIS do not adequately examine the role of natural disturbances and climate change stressors and their relationship to active management approaches and underestimates the amount of natural disturbances across the NPNF and overestimates the amount of future old growth. The Plan should require monitoring of natural disturbances to better inform an adaptive management approach to the creation of young forests.

Response: Desired conditions in the Climate Change section of the forest plan address long term goals for the forests to be resilient and adaptive to climate change. The climate change Management Approach states, "Managing ecosystems in the face of climate change focuses on maintaining or creating resiliency and adaptability. Maintain a suite of adaptation and mitigation options, focusing on sustaining process and function."

The background of the Plan's Climate Change section acknowledges that "ecozone abundance and distribution may be different as climate changes. The EIS, Chapter 3-Climate and Carbon, acknowledges that climate change is leading to ecosystems across the forests experiencing increased threats from climate change, including fire, extreme weather, and drought. These threats may occur more often, with more intensity, and for longer durations.

Assumptions regarding natural disturbance and old growth projections have been updated in the final EIS analysis (see Terrestrial Ecosystems section).

Comment: The plan must require infrastructure, including roads, stream crossings and culverts, be designed and maintained to accommodate increased storm intensity and frequency to protect water, plants, and wildlife.

Response: The Forest Plan includes management approaches in the Climate Change section that address the need to anticipate increased disturbances, including intensifying storms. The Plan's Transportation and Access section includes multiple plan components that address the potential for intense storms and rainfall, including a standard for roads to be located and designed

considering climate change-induced changes in precipitation. Preparation for more intense storms includes constructing appropriately sized culverts and stream crossings, relocating high risk roads and trails. Guidelines in the Plan's water section address minimizing the number of stream crossing in the design of roads and trails.

The Plan's Facilities section addresses incorporating sustainability concepts into new facility construction and renovation projects. A facilities standard states that all facilities shall be located to avoid impacts on aquatic habitat and prevent ground and surface water contamination. Facilities guidelines address designing and maintaining facilities to minimize impacts to resources, including watersheds and aquatic species, and implementing Best Management Practices to reduce erosion and sedimentation, and locating sites and facilities based on floodplain risk.

Comment: The Forest Plan should include additional management approaches for responding to invasive species, protecting and restoring native vegetation in streamside zones, using alternative genetic sources for species that have declined to critical levels due to climate change, addressing the uncertainty in the degree of climatic changes and climate change's potential impacts on spread risk, a management approach that acknowledges forests' critical role in climate mitigation, and a climate adaptation framework. A climate adaptation framework would allow monitoring outcomes to inform forest management and support the climate change management approaches.

Commenters suggested incorporating information from various climate adaptation frameworks and vulnerability assessments as references. The Forest Service should cite why the Plan needs to take a strong approach to addressing climate change impacts within adaptive management planning.

Response: The Forest Plan Monitoring program includes adaptive management strategies for responding to climate change which could lead to plan amendments and the adjustment of projects.

A comprehensive literature and modeling review of potential climate change effects and management options was completed using the FS Template for Assessing Climate Change Impacts and Management Options (TACCIMO) and incorporated into the assessment phase of the plan revision (see Appendix B). All of the examples listed in this comment and many more were reviewed and analyzed. These findings are incorporated into the plan and EIS, which informs the plan monitoring program.

Language in the Plan's Climate Change background section was updated to clarify that climate change will continue to impact the Nantahala and Pisgah NF's natural resources and that by using management practices to proactively account for predicted future conditions, the Forest Service can promote the immediate and long-term health of its forests.

The suggested USFS guidebook, *Responding to climate change in national forests: a guidebook for developing adaptation options* has been considered (GTR-88). However, it was written prior to the 2012 Planning rule. In addition, the guidebook specifically references TACCIMO, which was used by the FS during the assessment phase of the plan revision to identify climate change effects and management options, which is substantially similar to the suggested *Northern Institute of Applied Climate Science Adaptation Workbook* process-based approach. These

management options were folded into the climate change, resource and adaptive management sections of the plan.

A climate change management approach has been modified to prioritize maintenance and restoration in the microsites most resilient to changing conditions. Management approaches to address nonnative invasive species and streamside zones have been updated to reflect consideration of climate change.

Identification of alternative genetic sources is outside of the scope of this plan revision.

Comment: The Forest Service should be conducting an economic cost-benefit analysis to ensure that there are net economic benefits when the economic impacts of carbon emissions are taken into account.

The DEIS wrongly asserts that the differences in carbon emissions between plan alternatives are insignificant because they are minor relative to global emissions driving climate change. The DEIS does not account for the cumulative effects of emissions from the NPNF within the context of the total carbon impact contributions from the National Forest System.

Response: NEPA does not require a cost-benefit analysis (40 CFR 1502.22). The agency recognizes the existence of the SC-GHG tool, but also recognizes that the SC-GHG protocol states that it was “developed to assist agencies in meeting Executive Order (EO) 12866’s requirement to assess costs and benefits during the development of regulations.” The revision of a National Forest Plan is not completed to support the promulgation of a regulation.

The EIS has considered potential carbon emissions utilizing the Best Available Scientific Information (BASI), and to the degree that programmatic plan components and management approaches can or should incorporate concepts related to the issue.

The EIS carbon analysis indicates that carbon emissions from timber harvests are minor in the context of natural processes and global emissions. This is the appropriate scale of analysis because considering cumulative effects of climate change on the forests requires broader bounds of time and space to account for the additive and synergistic effects of climate change. Conducting an analysis at other scales is beyond the requirements of the planning process. The cited DACSE report findings apply to the entire state of North Carolina, not just the state’s National Forests. Thus, these findings do not apply directly to the NPNF. In response to comments, an alternative that focuses on maximizing carbon sequestration was considered but not in detail in Chapter 2 of the EIS. **Comment:** Climate change desired conditions for tools needed to remediate climate change (CC-DC-08) should include reference to minerals. The Forest Service should play a role in increasing domestic mineral production to lessen the United States’ reliance on foreign supplies.

Response: A Desired Condition in the Plan’s Minerals and Energy section (MIN-DC-02) has been modified to provide opportunities for critical mineral production for renewable energy technology and climate change mitigation infrastructure. Furthermore, the definition of ecosystem services footnoted in the Plan’s Climate Change section has been modified to include “energy, fuel, and minerals” as provisioning services to align with the definition in 36 CFR 219.19.

Comment: The Forest Service should not include woody biomass as a renewable energy source without thoroughly analyzing emissions and impacts on forest carbon stocks and flows from logging forests for woody biomass.

The Plan should place limits on what types of wood could be available for biomass harvest on the NPNF should a factory be built in the future.

Response: The use of renewable energy, including supplying wood to support biomass energy, is a is proposed, site-specific environmental analysis will be completed prior to project approval.

Comment: Biomass is not a renewable energy. Timber harvests for biomass energy production should not be allowed under the revised Plan. The DEIS does not sufficiently address and analyze the potential impacts of biomass production. The draft Plan offers no assurance that harvesting biomass will not conflict with other multiple uses of the Forests, nor violate the National Forest Management Act. Climate change mitigation should not be a basis for promoting biomass energy production within the Plan.

Response: According to the U.S. EPA, biomass is a renewable energy source (<https://www.epa.gov/greeningepa/renewable-energy-epa>). Site-specific environmental analysis for biomass projects would be conducted during plan implementation. Climate change impacts, tradeoffs, and cumulative effects would be considered in project-level environmental analyses.

Comment: The DEIS and Proposed Plan fail to adequately analyze and address the need to sustain and increase carbon storage and sequestration to achieve the GHG emission reductions by 2030 that are necessary to avoid disastrous climate change impacts

The DEIS is flawed because it obscures the carbon impacts of active management, as it asserts that the NPNFs will remain net sinks for carbon regardless of the plan alternative chosen. This ignores that the proposed increased harvesting will reduce the strength of the forests' carbon sink, and the cumulative effects of other similar, reasonably foreseeable USFS actions on other National Forests that will reduce the national carbon sink over the next ten years.

The DEIS makes unsupported qualitative assertions about how quickly the lost carbon stocks provided by harvested mature trees will be replaced by timber regrowth.

Response: The Forest Plan recognizes the role of maintaining forests to improve forest health and resilience to stressors, and to preserve many ecosystem services and co-benefits, including carbon uptake and storage. The background of the Plan's Climate Change has been modified to include language recognizing the forests' role in carbon sequestration and storage. In addition, Chapter 1 of the plan recognizes carbon sequestration as a benefit of the forest. Chapter 3 of the EIS recognizes the ecosystem benefits of carbon sequestration.

Comment: The DEIS does not consider an alternative that would reduce timber harvests and thinning to increase carbon storage and sequestration.

Response: In response to comments, an alternative that focuses on maximizing carbon sequestration was considered but not in detail in Chapter 2 of the EIS. To focus exclusively on maximizing carbon might prevent the accomplishment of other climate adaptation and

mitigation needs that arise during the planning period, such as maintenance and restoration of microsites, promoting habitat enhancement for species at risk of climate change, managing invasive species infestations, or restoring native vegetation in streamside zones, for example. Another alternative that relies exclusively on passive management is also considered but not in detail in Chapter 2 of the EIS.

Comment: The Forest service should strengthen its climate adaptation practices to protect the longevity and health of the NPNF. An example adaptation action could be increasing the number of streams occupied by native brook trout in high elevations.

Response: All action alternatives include a climate change section that focus on maintaining and creating ecosystem resiliency and adaptability, maintaining a suite of adaptation and mitigation options for the future, and monitoring to enable adaptive management when needs are identified during plan implementation. The Plan addresses the need to sustain water resources and aquatic ecosystems and provide habitat for aquatic plants and animals. The aquatic ecosystems section in the plan has several plan components that address native brook trout.

The plan's proposed activities generally maintain and improve forest health, and over the long-term activities are likely to increase carbon storage and reduce emissions.

Comment: Climate change impacts and associated mitigation measures should be considered in all aspects of forest planning and management.

The FS should include additional plan components that address climate mitigation and adaptation strategies such as responding to species' range shifts and managing fire-adapted ecozones with a shift in seasonal burn windows.

Response: All action alternatives include a climate change section that focuses on maintaining and creating ecosystem resiliency and adaptability, maintaining a suite of adaptation and mitigation options for the future, and monitoring to enable adaptive management when needs are identified during plan implementation. Climate change is addressed throughout the forest plan in resource sections, including but not limited to: forest health, geologic resources, minerals, water, soils, aquatic ecosystems, and terrestrial ecosystems plan sections. The plan's proposed activities generally maintain and improve forest health, and over the long-term, activities are likely to increase carbon storage and reduce emissions.

The climate change section of the plan includes a management approach regarding potential species range shifts due to climate change. The Fire and Fuels section of the plan has been updated to account for changes in fire management based on climate change-induced shifts in seasonal burn windows.

Comment: The Forest Service should calculate the recreation and carbon sequestration value of standing trees.

Response: Chapter 3 of the EIS considers the impacts of management activities on carbon across all alternatives, including their value as a carbon sink stored as live trees. The EIS also considers the scenic and recreational value of the forest. The intrinsic value of forest aesthetics as experienced by recreationists is managed by the USFS under law, regulation, policy and Plan

direction for scenery resources. Refer to proposed Plan forest-wide scenery direction in Chapter 2, and management area direction in Chapter 4 for additional details.

Comment: Commenters requested edits and additions to proposed monitoring questions in the plan to make it adaptive to changing conditions, including examining trends in carbon stocks at multiple spatial scales, disturbance trends occurring on the forest and how forest resources have responded in respect to attaining the natural range of variation (NRV) at multiple scale. The Forest Service should commit to mitigating climate-associated impacts if unexpected levels of disturbance are occurring during Plan implementation.

Response: The Broad-Scale Climate Change Monitoring Evaluation Report for the Southern Region addresses carbon stocks at a regional scale in the following monitoring question: "What effect do management units in the region have on a changing climate?" Using Forest Inventory and Analysis every 6 years, information learned from broadscale monitoring could influence forest management. (https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd786360.pdf)

The Final Plan monitoring chapter includes questions to address changes that may be due to climate change, including, "What disturbances have occurred across the forests what proportion are natural disturbances?"

Comment: Hydropower should not be included in the list of renewable energy opportunities on these forests. Existing hydropower projects in WNC create barriers to aquatic organism passage and in some cases, degrade habitat downstream.

Response: Hydropower is present on the forest and remains a valid multiple use and renewable energy on National Forest System lands. A Desired Condition in the Plan's Climate Change section provides examples of renewable energy options that will be considered, including "biomass, firewood, hydropower, geothermal, wind, and solar."

Providing specific details on the renewable energies considered is outside of the planning scope and if a hydropower project is proposed in the future, site-specific environmental analysis will be completed prior to project approval.

Comment: The Forest Plan should include a desired condition that considers ecologically sensitive siting of energy production and delivery, which includes not impairing habitat connectivity, T&E species, and other critical ecological functions and services.

Response: Proposals for energy production and siting will be considered consistent with management area desired conditions. Project specific NEPA analysis requires that the potential impacts of renewable energy project be considered in siting, including potential impacts on ecology and recreation.

GEOLOGIC RESOURCES

Comment: Commenters requested revisions to plan components in the Geologic Resources section of the Plan.

GEO-S-02 should be revised to first consider relocating or avoiding implementing proposed projects in areas with geologic hazards, before providing specific design measures to account for hazards.

A Management Approach should become a Standard to require a debris flow hazard and risk assessment for slope gradients of 40 percent or more to help prevent landslides.

Response: GEO-S-02 remains unchanged. GEO-S-02 requires that the location of proposed roads, trails, facilities, and management activities shall be screened for the presence of geological hazards, and if geologic hazards are present, then relocation and/or design measures shall be provided for management activities that may affect or be affected by the geologic hazards. "Location" refers to considering alternate locations, that is, relocation. The potential impacts of a relocation on other resources also needs to be considered and may not always be the best option. The Management Approach on debris flow hazard and risk assessments is an example of how the "shall" requirements of GEO-S-02 may be met and allows for consideration of a debris flow assessment when appropriate." The standard and management approach remain unchanged.

Comment: Commenters expressed support for a Management Approach regarding maintaining ditches and culverts to help prevent landslides.

Response: Thank you for your support regarding ditch and culvert maintenance. We agree that maintenance will help prevent landslides and their associated hazards.

Comment: A new desired condition was suggested: "Support access to geologic resources on Federal Lands for recreation, economic development and to improve customer experience."

Response: The Forest Plan includes a desired condition regarding the benefits that geologic resources provide.

Comment: The background section should discuss minerals, ores, and the economic aspect of geologic resources further.

Response: Mineral resources are covered in the Minerals and Energy section of the Plan. GEO-DC-02 addresses that geological resources provide economic and recreational benefits, among others. Additional discussion on the economic benefits of geologic resources can be found in the Recreation and Minerals and Energy sections.

Comment: The Summary of Effects Analysis for Geologic Resources in the Executive Summary of the DEIS does not sufficiently address Geologic Resources. This section should be renamed Geologic Hazards and Risks.

Section 3.2.3, Geologic Resources - Affected Environment heavily emphasizes biodiversity based on the geological environment. It does not discuss the mineral wealth residing in the mountains of the Nantahala and Pisgah National Forests lands or North Carolina's mining history.

Commenters support the DEIS's emphasis on geologic hazards and associated risks to public safety and infrastructure.

Response: The Executive summary has been updated in the FEIS to be a more succinct summary of the environmental analysis and does not include details specific to each resource section. Both geological hazards and the geologic setting of the Nantahala and Pisgah NFs are addressed in the Geologic Resources section of the Forest Plan and FEIS. There is also more extensive information and history about the minerals of the forest in the Forest Plan Assessment.

The Minerals and Energy section of the FEIS includes discussion of the mineral resources on the Nantahala and Pisgah NFs.

Comment: The relationship between the Forest Service and Bureau of Land Management should be explained, possibly in an appendix.

Response: The Federal Leasable Minerals section in Chapter 3 of the EIS includes an explanation of the relationship between the Bureau of Land Management and USFS. In addition, the Forest Plan background section for Minerals and Energy provides a discussion of the working relationship between the Forest Service and the BLM.

Comment: The North Carolina Geological Survey would like to share data with the Forest Service including mineral resource files, mine and mineral locations, archives, trade publications, and mapping of debris flows and landslides as well as the emergency response from the North Carolina State Emergency Operations Center.

Response: The Forest Service looks forward to collaborating further and reviewing the referenced datasets on mineral resources. As referenced in a Geologic Resources Management Approach, the Forest Service intends to include the North Carolina Geologic Survey Landslide Geodatabase (current version) and County Landslide Hazard Maps when screening for landslide hazards. We've also added a Management Approach in the Minerals and Energy section to consult with the NC Geological Survey on Mineral and Energy resources.

Comment: Most of the draft Plan's content on geology discusses soil and water. Commenters requested additional discussion on mineralogy, potential hard rock and fluid mineral development, and the economic impacts of mineral development in the context of the Forest Services' multiple use mandate. The DEIS and draft Plan focus on ecological servicing. The agency should provide more balanced discussion to effectively manage geologic resources.

Response: Thank you for your comments. The Minerals and Energy sections of the Plan and FEIS discuss mineralogy and potential mineral development, including hard rock or fluid. The Minerals and Energy sections of the Plan and FEIS provide further discussion on mineral development and associated economic impacts.

WATERSHEDS AND WATER

Comments: We recommend providing an objective or adjusting current objectives to address specific stream restoration and trail/road problems that are not in priority watersheds.

Rather than pushing to achieve Tier 2 objectives, we recommend putting more we recommend putting more effort into road and trail maintenance, as well as decommissioning, where appropriate.

Response: The objectives in the watershed section reflect that the emphasis will be in priority watersheds. Priority watersheds were developed to focus restoration efforts through the life of the plan but can be changed during the life of the plan without a plan amendment. Outside of priority watersheds, activities associated with streams, riparian areas, roads and trails across the forest will occur consistent with plan objectives. See Plan Appendix A for a list of consolidated objectives, organized by theme, including the Providing Clean and Abundant Water theme.

Comment: Comments requested edits to Watershed objective WSD-O-01, including clarifying the number of activities for both Tier 1 and Tier 2, increasing the objective activity levels, including wetland restoration. Commenters also requested water objectives separate from watershed objectives.

Response: Wetlands have been added to objective WSD-O-01 objective in the final plan.

The final objective numbers were edited in the Plan to provide clarity between Tier 1 and Tier 2. The total amount of Watershed Restoration Action Plans did not increase because forest Plan objectives must be within reasonably foreseeable budgets and existing capacity.

We have consolidated integrated objectives where possible in the plan. Watershed objectives address water resources.

Comment: Commenters requested plan components addressing water quantity, and baseflow monitoring. Comments also requested coordination with Coweeta Hydrologic Lab on their research linking forest management to water table levels.

Response: Multiple desired conditions in the watershed and water sections of the plan address the quantity and timing of waterflows (WTR-DC-05, WTR-DC-08, WTR-G-04). The climate change section's management approaches have been updated to "prepare for intense storms and fluctuations in base flow" to acknowledge that climate change may alter stream base flows. A new monitoring question was added for monitoring trends in baseflow. This monitoring question is identified as Tier 2 because the USGS is the agency that is tasked with monitoring long-term trends in stream flow. In addition, the Forest works in close partnership with Coweeta Hydrologic Lab where studies are on-going to help management address concerns with climate change and water quality and quantity.

Comment: Commenters requested certainty that priority watersheds action plans are spread out among districts and requested the ability to change the priority watersheds during plan implementation.

Consider adding Harper's Creek to Table 1 of priority watersheds

Response: The Priority Watershed list shown in the plan covers both the Nantahala and Pisgah NFs. The watersheds identified in the revised plan were identified collaboratively, as described in the background of the watershed section of the plan. The Forest desires to retain the liberty to prioritize locations based on future resource needs and those needs may preclude a Watershed Restoration Action Plan on every district. In accordance with Planning Rule directives, changes as to which watersheds in the plan are "priority" are made by administrative change - no plan amendment is required.

Harpers Creek drainage falls within the watershed of Upper Wilson Creek Watershed, which is identified as a priority watershed in the Plan.

Comment: We recommend adding a desired condition (DC) such as "Hydropower facilities and other impounding features affecting streams and rivers are removed/decommissioned to allow for natural flow regimes when they are no longer needed."

Response: Hydropower is present on the forest and remains a valid multiple use and renewable energy on National Forest System lands. The plan includes language in the Aquatic Ecosystems section to ensure that hydropower facilities and other impounding features affecting streams and rivers are managed to minimize and mitigate impacts on native aquatic species.

Comment: Extracting water for the bottled water industry should not be permitted at all, anywhere, on the forests. But when it is, there should be a sizeable fee associated.

Response: This is outside the scope of the forest plan.

Comment: Commenters requested that future project planning be conducted at the watershed scale. Watersheds provide an ideal mechanism for interpreting the cumulative effects of a multitude of management actions on soil and hydrologic function.

Response: The Forest Plan does not identify the scale for future projects. The plan provides the framework to accomplish work at individual locations, across priority watersheds, across ecozones, or across geographic areas. The specific needs of projects will be decided in future project design.

In this Forest Plan EIS, water cumulative effects are assessed at the 6th level watershed special scale, across all ownerships in the 18-county region.

Comment: We recommend adding the following DC: "Work with partners to support aquatic-based recreation opportunities (e.g., angling, boating, snorkeling) and high-quality conservation education opportunities."

Response: Working with recreation partners is addressed in the plan's public involvement and recreation sections.

Comments: Commenters appreciated the plan theme of Providing Clean and Abundant Water. Comments noted that managing forest waters is important because water plays a role for ecosystems, drinking water supplies, wildlife habitat and recreational settings and headwaters.

We recommend that the final plan be built around the premise that partner contributions are the best way to improve water quality, and that partner contributions should therefore be rewarded and encouraged.

Response: The plan recognizes the role of the forest to provide clean and abundant water in western North Carolina and other Southeastern states, and provides goals related to this theme in each geographic area. To meet the region's water needs and interests, our recommendations protect clean water for drinking, swimming, and fishing.

When it comes to watersheds, the Forest Service is just one land manager, and we all have to work together on resource management. Plan components throughout the plan, including the Community Connections section, and the geographic area goals for Clean and Abundant Water address the important contributions that partners provide to this important work.

Comment: The Forest Plan is missing guidelines and standards to incorporate consideration of high-quality waterbodies and sediment-sensitive streams into project-level planning, like outstanding resource waters and trout waters that might be particularly susceptible to sedimentation risks posed by ground-disturbing activities.

Although not currently anticipated in the Draft Plan, additional, project-specific best management practices and design standards are necessary for controlling non-point pollution sources in order to meet watershed desired conditions and maintain heightened water quality designations. To the extent these are developed in the context of individual projects, we also suggest the addition of a standard requiring that these design standards be incorporated into project plans.

Commenters requested that the plan recognize and provide management guidance for nine Outstanding Resource Waters (ORW) watersheds within Nantahala-Pisgah National Forests. Comments requested that these areas be mapped and listed by geographic area.

Response: The Forest Plan includes plan components to manage all streams consistent with the Clean Water Act and to meet state and federal water quality standards (WTR-DC-02). In response to this comment, a management approach has been added to the Water section of the final plan to consider state classified waters during project planning. The list of state ORWs is dynamic and therefore including a list in the Forest Plan would not account for changes to the ORWs over time.

Comment: Some commenters seek more or less detail in the plan components referring to Best Management Practices. Commenters expressed that they wanted to see Best Management Practices enforced, and others stated that reliance on Best Management Practices was insufficient plan direction.

Response: The degree of information included in the plan is based on the current plan experience of the degree of detail that is valuable for plan users, combined with what was identified as a need for change in the revised plan. The plan must also conform with current law, regulation, and policy. Agency and state Best Management Practices are referenced in plan components. The water section of the EIS describes that the NPNF has been monitoring the implementation and effectiveness of Best Management Practices for many years and have a high success rate for protecting water quality.

Comment: Consideration needs to be given to recreational paddling use in stream restoration projects, with an emphasis on safety, aesthetics, continued use, and collaboration.

Response: WTR-G-02 is designed to address stream restoration and ecological needs. As described in the public involvement section of the plan, project level analysis will include public engagement and the opportunity to identify impacts to the recreation community. During the development of stream rehabilitation projects, the project team discusses and analyzes past, present and future uses of the watercourse and incorporates the resulting range of needs into

the design. Stream rehabilitation using large wood structures typically meets the needs and safety of a broad range of recreational uses including paddling.

Comment: Water quality protections for the Nantahala and Pisgah should meet or exceed the water quality protections given for other Southern Appalachian National Forests so that our forest streams are protected from road building, skid trails, log loading areas, waste disposal and other ground disturbing activities.

The Forest should limit timber extraction in river corridors that provide recreation and drinking water.

Response: Providing clean and abundant water is a theme of the revised plan and several plan components ensure that water quality is protected for the people and ecosystems that depend on it. Water quality protections meet Federal and state law and the plan components as outlined in the Forest plan's water sections. All Forest Service activities must adhere to Federal and state laws as well as standards to protect water quality in the timber resources, recreation, and transportation and access sections.

Additionally, the revised plan establishes streamside zones where activities must contribute to improving the condition and function of the larger stream ecosystem. For all action alternatives, this has the effect of projects considering whole stream ecology more so than the approach of the current forest plan, strengthening the ecosystem-based approach to project planning.

The streamside zones standards that influence project design are in addition to NC Best Management Practices and mitigation measures, thus providing more restrictive guidance than state requirements alone. For example, within 50 feet of an intermittent waterbody, the NC Best Management Practices and Forest Practice Guidelines related to water quality would apply, and the project must also contribute to ecosystem restoration and meet the forest plan standard. The plan language explains that the streamside zone is not an equipment or management exclusion zone, but that activities must contribute to ecosystem restoration and not compromise long-term aquatic system and riparian function.

The Forest considered language for streamside zones in adjacent national forest plans and determined that an exact match to neighboring forest language will not meet the needs on the Nantahala and Pisgah NFs. In all action alternatives, the streamside zone is 100 feet of either side of (or perimeter around) perennial waterbodies (streams, ponds, and reservoirs) and 100 feet of perennial springs, bogs, and other wetlands. Between the draft and final plan, the distance of the streamside zone around intermittent streams was increased to 50 feet (from 15 in the current plan and proposed plan alternatives) to match the distance in which NC forest practice water quality guidelines apply. Ephemeral streams do not have a set streamside zone distance. In streams that flow only ephemerally, the streamside zone differs from perennial and intermittently flowing streams due to the lack of development of riparian and aquatic habitat features. Plan language was added in Alternative E to recognize that ephemerally flowing streams are often headwater channels, connecting to a network of streams that support an abundance of aquatic life and other beneficial uses of water. Alternative E adds a desired condition that clarifies the role of ephemeral streams in sediment transport, and adds plan management approaches to manage ephemeral stream channels and their areas of impact to reduce the risk of erosion and sedimentation by minimizing disturbance during management.

We reviewed project level monitoring, Forest Service and NC state requirements when updating the language from the current plan. The final plan language meets the desired conditions for restoring and maintaining ecosystems, riparian and aquatic resources and protections for rare species, while allowing forest management.

Comment: We recommend adding clarifying language to water standards (ECO-S-07) to examine sites during or shortly following a rain event so that the seeps and springs, as well as ephemeral and intermittent stream channels, can be more easily identified. We recommend adding a water standard that ditches or waterbars or other dispersal methods will be constructed and maintained to direct stormwater off skid trails and reduce potential sediment flow to streams and that ruts will be smoothed to restore hydrology and drainage paths. We recommend adding a standard that project specific best management practices, including FPGs and any additional design standards necessary for controlling non-point pollution sources in order to meet soil and watershed desired conditions, shall be incorporated into project plans.

Response: These additional standards were considered and were not determined to be needed because the other plan components in the water, soil and other forestwide resources of the plan meet the needs, desired conditions, and law, regulation and policy requirements for managing forest and soil resources.

Forest Service staff are well trained and experienced to identify seeps, springs and stream channels. When wet weather causes unexpected conditions to develop our site administrators exercise the authority to modify contractor actions to protect resources. Monitoring of forestry practices has shown a very high success rate and an improving trend for protecting these ecosystems under the guidance of the current plan. Thus, a need for change has not been identified by Forest monitoring and the revised plan's proposed standards and guidelines are anticipated to maintain the integrity of these ecosystems.

Comment: We recommend adding a desired condition to the water section that water follows natural flow paths and hydrologic connectivity is maintained. Roads, skid roads and trails, do not disrupt hydrologic connectivity and do not act as an extension of the stream network.

Response: The plan components in the water, transportation, timber, and recreation sections address natural flow paths and hydrology connectivity (including WTR-DC-07, WTR-DC-08, TA-S-08, and more).

Comment: We recommend an additional objective to maintain hydrologic and aquatic connectivity by using design measures to avoid disruption to hydrology and drainage paths and eliminating barriers such as undersized culverts.

Response: The revised plan has multiple objectives that address hydrologic and aquatic connectivity including WSD-O-01 and AQS-O-03.

Comment: The DEIS acknowledges that under the action alternatives, the water quality of 67% of local watersheds will experience continued decline, with sedimentation identified as a primary threat. DEIS at 117-18. The DEIS points to BMPs and future restoration projects to support a finding that Forest Service practices will not contribute significantly to sedimentation and other water quality impacts. See id. at 117. The Draft Forest Plan, however, does provide adequate support for this conclusion because the

Draft Plan and DEIS do not explain how the Plan components are adequate to avoid and minimize impacts to these watersheds.

Response: The Nantahala and Pisgah NFs annually conduct forestry practices monitoring to assess if activities are causing adverse impacts to soil and water quality. This information is reported out in an annual report and in the Forest Plan Monitoring and Evaluation Report. Monitoring shows that soil impacts, for example compaction and erosion, do occur from logging, however impacts are often small (considered de minimis) in size and severity due to the implementation of effective Forestry BMPs. Restoration activities are conducted annually across the Nantahala and Pisgah, and within priority watersheds, to improve watershed condition and function, typically focusing on reducing sedimentation.

Comment: The Forest Service must significantly revise its analysis of effects to account for the potential impacts of timber harvest and related roads on sedimentation and hydrologic alterations cumulatively, across multiple watersheds in the forests, and to water resources downstream which may be highly dependent on conditions in headwater streams. The Forest Service should consider both the classification or sensitivity of receiving streams in the timber harvest area, as well as the condition of downstream waterbodies, for example, before it dismisses what is believed is non-critical sediment, which may be adding pollutants in downstream impaired waters.

Response: The effects of timber harvest and roads on sedimentation and hydrology are analyzed in the EIS soil and water sections.

Comment: The cumulative effects analysis does not adequately consider the differences between alternatives. The cumulative effects discussion notes briefly that management activities would increase in watersheds "dominated with Matrix and Interface Management Areas where there may be an increase in road and trail construction," but dismisses the risks with best management practices, and therefore, does not explain where those risks are greatest under different scenarios.

Response: At the programmatic analysis level of the forest plan, the alternatives have comparable effects and the risks to water quality at an 18-county scale are not greater in one alternative than another.

Comment: Commenters identified editorial mistakes in plan component coding and language, and recommended clarification that "6th level watersheds" are USGS Hydrologic Unit Code (HUC) 12s.

Response: These corrections and clarifications were made in the final plan.

Comment: Commenters identified concerns about individual creeks or stormwater runoff locations.

Response: Addressing individual sites is beyond the scope of this forest plan revision. The plan outlines that the FS must comply with the NC water quality standards during all activities to meet the Clean Water Act. The Forest Service implements Best Management Practices (BMPs) guided by the state and fortified by our own Forest Plan standards and guidelines to protect water quality standards. Monitoring shows that the NPNF has been very successful at implementing effective practices to reduce adverse effects to the aquatic system.

Comment: Plan guidance and standards should provide direction as to the frequency of monitoring efforts during projects to gauge compliance with design measures and water quality standards. This

information is necessary both at the individual project level and across the full range of project activities over time.

Response: The Forests monitor the implementation and effectiveness of Forestry Best Management Practices annually to document our status for meeting forest plan standards, North Carolina State water quality standards, and, ultimately, the Clean Water Act. Review of forest practice effectiveness occurs annually as part of our program of work, and a summary of monitoring findings is drafted. In response to monitoring results, less than effective practices are diligently corrected to meet management direction. A summary of monitoring results is presented bi-annually in the Forest Plan Monitoring and Evaluation Report. A management approach was added to the plan to clarify this ongoing monitoring that takes place.

Comment: Forecasting change on a large (6th level) watershed level over 10-50 years is difficult, perhaps impossible, with this tool, as in many watersheds a significant proportion of land ownership is not in USFS ownership. Change in land use and riparian character on these private lands could be the main driver of aquatic integrity. These limitations are especially apparent for the analysis of the three federally listed aquatic species presented on pp. 274-283 of the DEIS. The conclusion that species "estimated health and resilience" would improve for Appalachian Elktoe or Littlewing Pearlymussel in some watersheds given changes on USFS land (Figures 87, 90) or would stay constant given changes on both USFS and private lands (Figures 88, 91) is not well-founded, as other issues likely drive species health and persistence, such as pathogens and climate change.

Response: The EIS Aquatic Ecosystems analysis documents the role of the FS in context of the broader habitat for each federally listed species and recognizes that there are factors outside the FS control. The role of the FS in land management planning is to ensure that the plan provides for the persistence of federally listed species. The cumulative effects sections for aquatic species that are impacted by action on non-Forest Service lands describes the potential impacts of factors beyond FS control, such as health and disease infestations and climate change.

SOILS

Comment: It is essential that the Plan contain standards adequate to ensure that soils are not damaged or lost during harvest activities at such rates that they will not be fully restored before the next entry. The DEIS does not include any basis for concluding that the Draft Plan would do so.

The plan does not specify design measures that should be provided, and scenarios or other site-specific conditions that might warrant degrees of additional measures to mitigate against erosion or slope failure.

Response: The plan includes standards and guidelines to ensure that soil productivity and soil quality are maintained. Forest monitoring indicates that through the use of best management practices, soil productivity is maintained on well over 85% of the activity area for timber harvest operations (EIS Chapter 3 Soils section).

Comment: The plan should include a matrix of risk factors in erosion-prone soils that would guide management activities and reduce the need for successive project-level NEPA analysis assessing worst case scenarios.

Response: The soils section of the plan (SLS-S-01) includes a standard that vegetation management activities, road and trail design and infrastructure activities should be screened for the presence of highly erodible soils. Additionally, the geological resources section includes a standard that locations of proposed roads, trails, facilities and management activities should be screened for the presence of geologic hazards. Several management approaches are provided for project considerations when addressing slope stability during site-specific analysis.

Comment: The plan does not include a definition of highly erodible soils that would compel additional design measures.

Response: A definition of highly erodible soils has been added to the glossary for the final plan.

Comment: We also suggest adding language to SLS-DC-02 to make sure Desired Conditions meet state water quality standards and requirements that land-disturbing activities prevent visible sedimentation. This will help prevent downstream degradation, cumulatively, which is outside the scope of project monitoring.

Response: Soils standard 01 addresses this by including language that requires design measures are used to reduce erosion potential and effects to natural resources.

Comment: The 85/15 standard was at one time assumed to reflect the best available science for preventing cumulative soil impairment. At that time, it was an explicit requirement from Region 8, and something that Forests could rely on without independent, original analysis. That Regional requirement has now been withdrawn, because the literature now suggests that the simple 85/15 rule is not reflective of best available science.

It is not clear how allowing 15 percent of soil to lose long-term productivity would comply with NFMA. The sensitivity of soils and steep slopes present in these forests suggests this degree of disturbance could be both significant and violate NFMA's prohibition against damaging soils. This is particularly true for cumulative impacts. In the absence of a plan-level analysis, the Forest Service has no basis to determine whether project-level impacts will cumulatively impair soil productivity in violation of NFMA.

Response: Soil Standard 2, SLS-S-02, was carried over from the previous plan without making any adjustments since soil disturbance monitoring indicates that the standard has been adequate to maintain an acceptable level of soil productivity while facilitating logging operations to meet project objectives. Layout of logging disturbances are approved by the Forest Service Sale Administrator, taking into account environmental concerns and limitations, for minimal disturbance and alteration of soil productivity. For example, old skid roads are reused when available and appropriate, and stream crossings are avoided. Therefore, there was no need for change. The Soils section in Chapter 3 of the EIS addresses impacts to soils from forest management activities and soil quality monitoring shows that the level of detrimental soil disturbance is minimized during operations and is often well below the 15% guidance (data ranges from 0.3% to 16.3% with an average detrimental soil disturbance of 6.9%).

Comment: The Partnership supports the last sentence in Guideline SLS-G-02 and recommends that it be its own guideline, SLS-G-03: "The minimum amount of soil should be exposed at any given time during project execution."

Response: SLS-G-02 remains unchanged from the draft plan. Separating out the last sentence in this guideline and making it a standalone guideline would mean that all projects on the forests would be required to expose the minimum amount of soil at any given time during project implementation, which is not realistic or feasible. At the completion of project implementation, design measures are used to revegetate the area and minimize soil exposure.

Comment: The Forest Plan must require debris hazard assessments where activities are planned on slopes greater than 40%, it must require the obliteration of skid roads and temporary roads and return to the area to grade upon completion of a logging project, and it must require ditches and culverts to be maintained.

Response: Mass wasting and landslide hazard analyses are considered at the project level. The agency does not have the expertise or capacity to conduct specific landslide analyses but does consider NRCS soil erosion hazard analyses. We collaborate with the NC Geologic Survey to assess risks during project planning. The Forest Plan includes a standard in the Transportation section that requires temporary roads to be decommissioned when they are no longer needed, including removing drainage structures, re-contouring, and stabilizing the final slope.

Comment: The plan should not roll back standards for logging on steep slopes. The plan should restore and strengthen protections for steep slopes and non-aerial logging on steep slopes above 40% should never be permitted.

Response: Proposed plan standards address identified concerns about logging on steep slopes. Plan standards related to logging on steep slopes have been designed based on decades of monitoring by the Forest. The Forest follows NC Forestry Practices as well as additional Forest Plan measures to ensure that soil erosion is minimized. During project analysis, steep slopes are evaluated by the assessment team along with needs to restore the logging access system of roads. All soil disturbance, including temporary haul and skid roads, during and after logging is stabilized with approved Forestry BMPs to reduce the risk of erosion.

A standard in Plan's Terrestrial Ecosystems section states "Conduct a site-specific review to determine the appropriate logging systems for management on sustained slopes (> 200ft) over 40 % slope." Appropriate logging systems will be determined at the project level to account for future advances in logging technology and site-specific conditions, while ensuring management that prevents erosion. Project-level environmental analysis will be performed to ensure there are no significant environmental impacts.

Plan standards in the revised Plan are consistent with the current, existing Land Management Plan for the Nantahala and Pisgah NFs.

Comment: Soils standard 1 that requires screening management activities for the presence of highly erodible soils should be edited to include 'other infrastructure'.

Response: The soil standard was updated in response to this comment.

Comment: The final EIS should also consider additional factors like soil recovery rates and expected soil loss rates under baseline conditions and with disturbance. The Watershed Erosion Prediction Project (WEPP) is a readily available tool that the Forest Service could incorporate into planning. The model

inputs several relevant erosion variables, including climate, soil texture and erodibility, and includes modules for soil disturbance scenarios (e.g., roads). Conventional USDA erosion planning models such as Revised Universal Soil Loss Equations and Revisions (RUSLE), likewise, can provide advanced erosion predictions

Response: At the project level the FS considers additional factors to assess project activity impacts to the soil resource.

Comment: SLS-DC-02 notes that compaction and erosion should be minimized. We agree that erosion and compaction can affect long- and short-term soil productivity. The plan lacks guidance and standards addressing compaction, particularly on soil types that might be most easily damaged by compaction.

Response: The plan includes standards and guidelines to ensure that soil productivity and soil quality are maintained. Forest monitoring indicates that through the use of best management practices, soil productivity is maintained on well over 85% of the activity area for timber harvest operations (EIS Chapter 3 Soils section).

Comment: Core to the agency's analytical error is over-reliance on the provided by BMP monitoring and soil disturbance monitoring, which paints only a partial picture of experience gained on the forest - and in some instances obscures chronic problems. Because the agency continues to exaggerate the monitoring results and misuse them as a basis to sidestep a forthright analysis of the effects of logging in steep erosive soils - as it did in the Buck project and other recent projects - we analyze them in detail in the attached Review of Nantahala-Pisgah Monitoring of Best Management Practices.

Response: Forestry Best Management Practices (BMPs) monitoring has been used to assess implementation and effectiveness of BMPs since the 1990's. This information has been used to address water quality issues related to forestry operations, and we have seen a dramatic improvement in the implementation and effectiveness of BMPs through the years. The summary of NFsNC BMP monitoring data, presented in each years' monitoring report is an accurate presentation of the data used to inform the analysis of timber management activities but has not been peer reviewed. In response to this comment, the Forest Service will submit the analysis protocol for comment to our FS research branch and consider the need for changes to future BMP monitoring documents.

Comment: The EIS lacks an analysis of the interaction between risk factors and effects to long- term soil productivity and ecosystem integrity of soils across the forest, under the timber harvest and road infrastructure scenarios allowed in the Draft Plan. Instead of providing this analysis, the DEIS instead relies on best-case assumptions about the performance of best management practices (BMPs) in timber sale implementation on a forest- wide scale.

Response: More detailed soil analysis occurs at the project level, where short- and long-term soil impacts are assessed based on Forest Plan Standards and Guidelines. The NFsNC are not anticipating using predictive models for analysis due to their limitations. Instead, we will be continuing to rely on empirical data derived from Forest Plan monitoring to guide management activities.

AQUATIC ECOSYSTEMS

Comment: Aquatic Organism Passage should be incorporated into all road-stream crossing construction and replacement on fish-bearing streams unless those structures are protecting native species.

The Plan should include a specific objective for replacement of impaired stream crossings to improve aquatic organism passage. Priority for improving stream crossings should be considered in places most significant to salamanders on the forest.

The Forest should modify objective AQS-O-03 by increasing the number of AOP projects and clarifying that they will be completed on both the Nantahala and Pisgah NFs. Culverts should be right sized in light of increased storm intensity due to climate change.

Response: Incorporating aquatic organism passage into stream-road crossing projects is required by law, regulation, policy. Aquatics objective 03 prioritizes aquatics organism passage projects in areas where fragmented populations of native brook trout and other federally listed species or species of conservation concern occur.

Resource needs, priority watersheds, and other funding opportunities drive where these projects occur across the Nantahala and Pisgah NFs. The use of appropriately sized culverts in the face of increased storm events is acknowledged in the Climate Change section of the plan as well as the Transportation section.

Comment: Commenters suggested edits and additions to multiple Aquatic Systems plan components to improve clarity and intent.

Response: Where possible, edits were made to the wording of several aquatics plan components and an additional management approach was added that speaks to sustaining and improving aquatic habitat to benefit native aquatic species including brook trout.

Comment: The Forest Service should consider the impacts of climate change on native brook trout populations.

Response: Streamside forests will protect and mitigate potential temperature changes associated with natural and anthropogenic disturbances including climate change.

Chapter 3 of the EIS includes an evaluation of potential effects of climate change on rare animal species. This analysis also references brook trout.

Comment: AQS-G-02 regarding the application of pesticides or herbicides in aquatic areas is overly restrictive and the Forest Service should rely on EPA-approved label instructions.

Ephemeral streams should be added to this objective.

Response: In addition to following all EPA standards for the application of pesticides and herbicides, the Forest Service must also follow agency policy.

Ephemeral streams do not support aquatic populations and therefore have not been added to this guideline. However, the importance of these areas to downstream resources is fully recognized in other plan components.

Comment: Increase the number of streams occupied by native brook trout in the highest elevation, highest flow cold water streams. This is necessary to counteract losses in other warmer streams.

Response: This seems to be a misunderstanding of potential effects of climate change on stream systems. Water temperatures, and therefore trout habitat and populations, have the potential to be affected by warming waters from both the "top and bottom" of the watershed. Conserving only higher elevation streams is not a viable strategy. The Forest Plan focuses on the integrity of all aquatic systems which must be conserved to combat the impacts from climate change.

Comment: A new Standard should be added that states, "No activities shall be undertaken to expand the range of non-native trout species into areas that are potentially suitable for native brook trout."

Response: Language was added to AQS-S-01 to address activities in habitat that is potentially suitable for or occupied by native brook trout.

Comment: The aquatics portion of the appendix is difficult to follow and appears to be missing key information. Table C presents expected outcomes for various watershed indicators, but there is no analysis that demonstrates how a composite indicator outcome was calculated, which is presented in the DEIS (e.g., Figures 87 and 88).

Response: Appendix C has been updated for the final plan. Appendix C summarizes watershed composite scores and references the amount of Forest Service ownership within each watershed. The project record contains detailed Ecological Sustainability Evaluation outputs listing expected outcomes for each indicator for each watershed. The EIS Chapter 3 Aquatic Resources analysis summarizes information presented in Appendix C, viewed with the detailed information in the project record.

STREAMSIDE ZONES

Comments: Commenters requested changes to the streamside zone language standard SZ-S-01, requesting different distances around perennial, intermittent, and ephemeral streams. Commenters requested the Forest consider revising the plan language to match streamside zones language in neighboring forests, the Appalachia Region Forest Stewardship Council, BMP manuals from other states or other distances proposed using hybrid approaches. A comment asserted that streamside zones should be larger in the presence of federally listed species.

Commenters felt it was important for streamside zones to be free from equipment or timber harvest, while other commenters disagreed, citing the need for restoration of these areas.

Commenters asked for clarification on the relationship between this standard and the NC Best Management Practices and noted that the standard was confusing to follow.

Response: The revised plan establishes streamside zones where activities must contribute to improving the condition and function of the larger stream ecosystem. For all action alternatives, this has the effect of projects considering whole stream ecology more so than the approach of the current forest plan, strengthening the ecosystem-based approach to project planning.

Standard SZ-S-01 was updated between draft and final and language was added to the Final EIS to describe effect of this change.

The streamside zone is 100 feet of either side of (or perimeter around) perennial waterbodies (streams, ponds, and reservoirs) and 100 feet of perennial springs, bogs, and other wetlands. While the current forest plan allows perennial zones to be reduced to 30 feet, the revised plan states that streamside zones will be 100 feet around perennial streams unless the project team determines that there are breaks in the topography within that distance where, water flow is directed away from the protected waterbody.

Between the draft and final plan, the distance of the streamside zone around intermittent streams was increased to 50 feet (from 15 in the current plan and proposed plan alternatives) to match NC Forest water quality guidelines.

Ephemeral streams do not have a defined streamside zone distance because they lack the development of riparian and aquatic habitat features. Plan language was added in Alternative E to recognize that ephemerally flowing streams are often headwater channels, connecting to a network of streams that support an abundance of aquatic life and other beneficial uses of water. ephemerally flowing streams support an abundance of aquatic life and other beneficial uses of water, and are often headwater channels, connecting to a network of streams. Alternative E adds a desired condition that clarifies the role of ephemeral streams in sediment transport and adds plan management approaches to manage ephemeral stream channels and their areas of impact to reduce the risk of erosion and sedimentation by minimizing disturbance during management.

The plan language explains that the streamside zone is not an equipment or management exclusion zone, but that activities must contribute to ecosystem restoration and not compromise long term aquatic system and riparian function.

The zones in this standard that influence project design are in addition to NC Best Management Practices and mitigation measures, thus providing more restrictive guidance than state requirements alone. For example, within 50 feet of an intermittent waterbody, the NC Best Management Practices and Forest Practice Guidelines related to water quality would apply, and the project must also contribute to ecosystem restoration and meet the other provisions of the forest plan standard.

When federally listed species require management needs broader than the streamside zone, the Forest Service will coordinate with USFWS as outlined in species recovery plans.

The Forest considered language for streamside zones in adjacent national forest plans and determined that an exact match will not meet the needs on the Nantahala and Pisgah NFs. We reviewed project level monitoring, Forest Service and NC state requirements when updating the language from the current plan. The final plan language also meets the desired conditions for restoring and maintaining ecosystems, riparian and aquatic resources and protections for rare species, while allowing forest management.

Comment: Streamside Zone Standard 2 should be changed to provide better protection for Streamside Zones. We recommend replacing the phrase "unless satisfactory mitigation measures have been designed" with the FSC language "except for designated stream crossings or when placement of disturbance-prone activities outside of the SZ would result in more environmental disturbance than placing such activities within the SZ."

Response: Streamside zone standard 02 has been updated in the final plan to include language recommended in the comment.

TERRESTRIAL ECOSYSTEMS

Comment: "Tier 1 - Maintain existing balds." - We recommend adding a Tier 2 that extends bald maintenance to include restoration of overgrown balds, to establish plans for native grass and forb restoration, and develop a mowing plan that ensures maintenance of adequate native grasses, forbs, and food resources for pollinators throughout the growing season.

Response: The objective for balds was updated in the final Plan to specify maintenance or restoration of 10-20 acres of existing grassy balds (PAD-O-04). This is in addition to the bald management that is specific to the Roan Mountain MA. Because quality and specific quantity of shrub and heath balds across the forests is not well known at this time, remote sensing imagery and other tools will be used during the planning cycle to gather more information and monitor existing sites.

Comment: We recommend adding a guideline that provides for the maintenance of management areas in a manner that will provide native nectaring and host plants for pollinators throughout the active season (spring-fall). This includes no/reduced mowing of good pollinator habitat during the growing season.

Response: The forest plan includes desired conditions (WLF-DC-02, WLF-DC-05) and a guideline (WLF-G-04) that emphasize the importance of pollinator habitat across the Forests and the maintenance of this habitat for a diversity of species. Decisions regarding mowing are best addressed during project planning and take into consideration the flowering season.

Comment: Assessment of the departure from NRV across the region and the national forests' role in attaining those conditions should be included explicitly in the monitoring framework.

What are the trends and conditions of NRV by ecozones within priority watersheds, and outside of priority watersheds?

Response: Change in the states of vegetation is addressed in Category 2 Monitoring Questions. The questions relate to forest structure such as young forest, open forest conditions, and old growth for the entire forest. Question MQ2-6-T1 focuses on whether the Forests are moving toward desired seral stages and identifies forestwide departure tables (departure from NRV) as a monitoring indicator. NRV is intended for use at the forestwide scale, therefore it is not stepped down to ecozones within individual watersheds. There is a separate question to address the conditions of priority watersheds (MQ-1-1T1), and a Tier2 question for the condition of streams and stream channels outside of priority watersheds (MQ1-6-T2).

Comment: Remotely sensed data can be used to provide periodic snapshots of where and how much disturbance has occurred on the NPNF and adjacent lands. These data can be paired with species surveys and citizen science data sets such as eBird to evaluate population trends and species responses to management. This paired approach will provide assurances that management is sufficiently addressing the habitat needs for young forest and woodland associate species and not significantly affecting populations of interior forest species.

Response: The final plan includes a monitoring question to look at disturbances across the Forests (MQ6-5-T2.) The monitoring guide will identify specific data sources, however, data from USDA Landscape Change Monitoring System will likely be included. This monitoring question is intentionally identified as a Tier 2 monitoring question with the expectation that there will be data from others that is used to inform the assessment.

Comment: Requests to consider American Chestnut restoration in the forest plan revision process. Possible limitations on management could prevent successful restoration of the species.

Response: The Plan's Terrestrial Ecosystem and Forest Health sections direct the agency to consider the full picture regarding the Nantahala and Pisgah NFs' perspective on American Chestnut restoration, including working collaboratively with American chestnut recovery groups on local opportunities for recovery of the species. A guideline allows for flexibility for district projects to include American chestnut test plantings and future restoration plantings once the science works out the silvicultural options for sustaining a healthy chestnut population in the future forest canopy. This language is in full support of the regional Memorandum of Understanding (MOU) supporting American chestnut restoration efforts by several partner organizations.

Comment: Desired conditions for Landscape Pattern and Connectivity should be updated to emphasize core unfragmented blocks of forest where natural processes dominate.

ECO-DC-05 should include be updated to reference the movement of priority species between patches and that linear corridors do not fragment interior forest conditions or create barriers to movement.

Response: Desired conditions for Forest Landscape Pattern and Connectivity were updated in the Final Plan.

ECO-DC-05 was updated to clarify the desired condition is for forested connectors that facilitate species movement between patches.

Comment: Shortleaf pine on many locations is in decline without active management or fire for reproduction. Coweeta has documented the loss of 90% of its yellow pine since the 1930s. The focus for shortleaf should be finding places to maintain or reestablish its ecosystem rather than designating it for old growth with little or no restoration activities which would lead to further decline of the shortleaf pine ecosystem across the Forest.

Response: The final plan includes an objective for prescribed fire (ECO-O-06) that includes shortleaf pine as a priority fire-adapted ecozone. Integrated ecosystems and wildlife habitat management approaches include restoration of shortleaf pine and the Hiawasee and Fontana Lake Geographic Areas include goals for restoration, maintenance and management of shortleaf pine forests using timber harvest and prescribed fire.

Comment: The Draft Plan further fails to consider "all lands" when calculating the amount of regeneration harvests needed to create more young forests. Most of the broader landscape is comprised of privately owned, younger forests and the Forest Service needs to reexamine the purported need to use regeneration harvests to create much of the same habitats.

When viewed through the lens of the broader landscape of the 18-county region, there is arguably much less need to use regeneration harvests to create an additional 60,000-90,000 acres of young forests within national forest boundaries, particularly if many of these existing young forests occur either as inholdings or in proximity to national forest boundaries.

Response: The FEIS contains information regarding the condition of the surrounding forests in the and Forest Structure cumulative effects sections. Early successional habitat on private lands is increasingly being developed, including areas adjacent to the Forests. Managing the national forests with a range of age classes and diversity of structure is critical to providing quality habitat for the diversity of plants and wildlife that depend on national forest system lands.

Comment: Commenters support the desired conditions for woodlands but would like to see objectives for woodlands creation increased in both Tier 1 and Tier 2 objectives.

Given the importance of woodland habitats to a large suite of species and overall biodiversity across the forest, a greater number of acres should be treated over the life of the Plan. NCWRC's Bird Matrix (2016) estimates that 240,000 to 386,000 acres of woodland (excluding YF) should occur across the Forest at any one time.

To be clear, meeting the woodlands objective for the restored condition will require more treatment, including repeated treatments of the same acres with fire, noncommercial treatment, commercial treatment, or a combination thereof. This recommendation should be considered along with the list of priority treatments (condition- based objectives), which indicate the degree of canopy removal appropriate in different ecozones.

Response: The final plan includes an increased emphasis on woodland creation in objectives for thinning and prescribed fire (ECO-O-05 and ECO-O-06) at both tiers and adds a management approach for restoring open forest woodlands.

Comment: We suggest expanding the definition of open forest/woodland to include ecozone-specific classifications, recognizing the diversity of these habitats across the Forest (e.g., provide descriptions of woodland by ecozone in Table 2, beginning on p. 47 of the Plan).

Response: The final plan includes restoration priorities by ecosystem moisture classes in the section titled: Integrated Ecosystem and Wildlife Habitat Management Approaches.

Comment: The forestwide desired amounts for "open forest condition" seemingly include desired acres for permanent openings, young forest, and woodlands combined. Forestwide desired amount totals for permanent openings, young forest and open woodland forest should be separated.

Response: The final plan includes an increased emphasis on woodland creation in objectives for thinning and prescribed fire (ECO-O-05 and ECO-O-06) and adds a management approach for restoring open forest woodlands. These objectives and management approach are separate from the objectives for young forest habitat and grass, forb, and shrub habitat.

Comment: A stated standard requiring the Nantahala and Pisgah NFs to be managed within Natural Range of Variation (NRV) by ecozone will constantly be used to stop projects designed to restore the forest and improve wildlife habitat.

Response: The final Plan does not include a standard that requires management consistency with the Natural Range of Variation. The forest plan explains that NRV was used to understand landscape ecological integrity and does not constitute a management target. NRV is not the same as desired conditions. NRV is to be used at the landscape scale and should not be evaluated at the project level.

Comment: Commenters expressed concern that the Forest Plan has an overreliance on NRV which will severely limit forest restoration in typical upland oak and cove hardwood stands.

There is concern from some stakeholders about the gap between desired conditions based on NRV, objectives to meet those desired conditions, and assurance that projects will be prioritized and conducted in ways that create and maintain habitat for wildlife species related to all seral stages. Wildlife-specific goals related to ecozones, elevation, populations, and approaches could help bridge that gap and provide guidance on projects that builds confidence among interests.

Response: The Final Plan addresses wildlife habitat conditions in the desired conditions, standards, and guidelines in a new subsection titled Wildlife Habitat across Terrestrial Ecosystems. Integrated Ecosystem and Wildlife Habitat objectives and management approaches provide specific priorities related to ecozones, elevations, populations, and wildlife habitat needs.

NRV provides some context for how ecosystems and wildlife species have evolved over time, but it is not used as the only criterion for determining desired conditions and objectives in the plan.

Comment: Commenter would like to see a more supportive statement regarding the use of portable bridge mats for establishing temporary waterway crossings with the hope that if there were recommendations or incentives for using bridge mats on National Forest lands, perhaps that would help to facilitate broader adoption of them across the region.

Response: The Forest Plan includes a standard to design, construct and maintain erosion control features to meet soil and water quality standards, and includes reference to the use of bridge mats for crossing established stream channels during logging (TIM-S-07). They are included as an alternative to temporary bridge use. Creating greater emphasis here would reduce the site-specific flexibility of the district staff personnel at the project level and possibly lower the emphasis on temporary bridges. Additionally, the Forest Plan does not make recommendations for forestry practices on nonfederal lands in NC.

VEGETATION MODELING

Comment: The Forest Service's Spectrum Model is Deeply Flawed, and it Contains Assumptions that Conflict with Assumptions in the Forest Service's NRV Model. The Spectrum Model includes a systematic over-estimation of old growth on the forests, which undermines the Forest Service's conclusions that the Draft Plan's objectives for young forest creation and its objectives for old growth conditions can both be met in all alternatives.

Response: Vegetation modeling that was done for the forest plan revision was based on best available science. Inputs and assumptions were refined through multiple iterations with resource managers, scientists and modeling specialists at the Forest Service, universities, and other nationally recognized natural resource organizations. Peer reviewed literature and natural resource datasets from the USDA Southern Research Station, the US Geological Survey, the National Oceanic and Atmospheric Organization, NC Emergency Management, LANDFIRE, and others were used to validate and refine the models. As described in other responses below, modeling assumptions were reviewed between draft and final and refinements made in coordination with modeling experts. (See Appendix D).

Models are not perfect, but they do provide information to aid in natural resource decision making. Some of the concern about the models that is expressed in comments at draft is based on concerns about what happens in future decades years from now. (The EIS models two centuries). As they project into the future, the models become less certain, especially in changing conditions such as we are facing with climate change. The EIS discloses this uncertainty. Ultimately, the Forest Plan is intended to provide management direction for the next 10-15 years. The Plan's Chapter 5, the adaptive management strategy and monitoring program, establishes a framework for the forest to adapt and adjust other time as needed to respond to changed conditions.

The NRV and Spectrum models use different assumptions because the initial conditions, timeframes, and scale of analysis are different, and the models are used to provide different perspectives to inform plan decisions. Based on comments received at draft, the team updated the Spectrum model using best available science from academic literature and forest records between draft and final. (Refer to the next response for information on updated assumptions related to natural disturbance.) The EIS Terrestrial Ecosystems Forest Structure sections on young forest, open forest and old forest have been updated to reflect updated modeling between draft and final. The EIS demonstrates that movement toward desired conditions for

both young forest and old growth forest conditions are not mutually exclusive during the life of the revised plan. (See also response to comments on Old Growth.)

Comments: Both the DEIS and the Draft Plan treat natural disturbance in an arbitrary and unjustified manner that doesn't align with best available science. The Spectrum Model is deeply flawed and includes an underestimation of natural disturbances on the forests and a corresponding overestimation of how much young forest creation must occur in order to move the forests toward NRV.

The role of natural disturbances (hurricanes and mass-wasting events (landslides)) are underestimated in the DEIS (especially by Spectrum). There is regional evidence that natural disturbances alone are sufficient for meeting the diversity requirements of the forest planning rule without management intervention.

The DEIS cites evidence of large-scale turnover in plant communities (seral stages) due to periodic insect infestations and wildfires. These disturbances are likely to increase in duration, intensity, and frequency depending on emission scenarios (as cited in the DEIS). The scientific literature includes many approaches to estimating future disturbance dynamics in a changing climate. The Forest Service needs to include this model in estimating future disturbance effects on forest age class distributions.

Additionally, the more recent return of forest cover (general conditions) following decades of reduced logging should not be mistaken as an old growth ecosystem "quickly" set to recover when in fact old growth age classes are still deficient relative to the pre-industrial logging baseline and Region 8 old growth definitions. Spectrum modeling of future forest age classes is based on a false baseline of current and ongoing disturbances to project the likelihood of an intact old-growth ecosystem within 50-75 years.

Response: The NRV and Spectrum models are designed to provide different perspectives to inform the forest plan decision. NRV has increased our understanding of the dynamics of the ecological systems that comprise the forest. The context and assumptions in NRV are based on a 1,000-year timeframe of the past when the integrity of the landscape had not been compromised by human interactions. Therefore, the timeframes and initial conditions in NRV allow for multiple return intervals of disturbances to occur within the model. Spectrum provides information about the feasibility of management actions and is used mainly for ecological evaluation in the near future (10-50 years). As such, the initial conditions, timeframes, and scale of analysis for these models are different.

In modeling vegetation change over time for the EIS, the forest planning team considered forest natural disturbance types, disturbance frequencies and effects on vegetation structure. Based on comments received at draft, the team re-reviewed assumptions about natural disturbance using best available science from academic literature and forest records between draft and final, updating modeling assumptions to reflect the latest information. The results were used in the vegetation model (Spectrum) for the NP Forest Plan and FEIS summary, updating the assumptions about natural disturbance in Spectrum involved defining early successional habitat's structure attributes, size, width and percent cover. The model considered three types of disturbances from the recent past: wildfire, storms (including landslides), and insect and disease. The Natural Range of Variation was considered, because it provides insights for how

ecosystems and species evolved over the last 1,000 years. However, during that timeframe, human impacts on the environment were less evident than today. So, in addition to looking at NRV, the modeling considered a variety of data sources that explain natural disturbance patterns in the recent patch, from recently acquired LiDAR and remote sensing. When primary data were not available, information from the literature was used to formulate the historic pattern of young forest patches and gaps. For example, fifty years of data (1970-2019) from the USDA Southern Research Station was used to estimate the historic pattern of wildfire, and landslide records from the NC Geological Survey were used to estimate landslide records. In addition to looking at the Natural Range of Variation and recent past records, several scenarios were considered in developing estimates for future natural disturbance, including scenarios that make significant increases in disturbance to climate change. Appendix D of the FEIS includes detailed information regarding natural disturbances and how these were updated in the final EIS, including multiple scenarios under a changing climate that would result in increased disturbance levels.

This EIS analysis does not support the commenter's assertion natural disturbances alone are sufficient for moving ecosystems toward desired conditions during the life of the plan.

Comment: The Forest Service's reliance on its flawed Spectrum model has prevented it from adequately assessing and disclosing the tradeoffs between ESH creation and old growth, it cannot support the agency's conclusions about the amount of ESH that is needed on the landscape, and it cannot support the agency's conclusions about the amount or rate of development of old growth conditions on the landscape.

In a properly constructed model, if ESH were at the top of the NRV range, then old growth would necessarily trend toward the bottom of the NRV range, and vice versa. By showing that we can simultaneously have too much of both age classes, this model proves itself to be utterly unreliable.

Response: See responses above and EIS Appendix D for more information about changes between draft and final and modeling assumptions. The updated Chapter 3 of the EIS (Terrestrial Ecosystems, Forestwide Structure section) describes the rate and development of both young forest and old forest conditions on the landscape. The EIS discloses that approximately 120,000 acres in Tier 1 objectives and 270,000 acres in Tier 2 objectives would be managed in a mosaic of young, mid, and late seral states to meet objectives in the forest plan for young forests. This is accomplished by having multiple regeneration actions on the same land unit over time and thereby allowing a large proportion of the forest to age over time. The Forest Structure section in the FEIS has been updated to more clearly reflect the tradeoffs between early successional habitat and old growth development.

Comment: The FEIS presents an inherent bias in the display of age class data by underestimating young growth (split) and overestimating old growth (lumped) and uses this to justify logging of older age classes (believe to be above NRV) to create young (early seral) forests (believed to be below NRV). The low amount of 0-15 age group in Table 1 for Nantahala-Pisgah is not supported by other sources cited in the DEIS, notably, Lewis et al 2017.

Response: The EIS Terrestrial Ecosystems Forest Structure sections on young forest, open forest and old forest have been updated to reflect updated modeling between draft and final. The

older age classes were based on Region 8 Old Growth guidance analysis; however, we increased the minimum age for several ecozones, such as northern hardwood forest, based on professional judgment applicable for the Southern Appalachians. The age breaks for other age classes were based on LANDFIRE biophysical settings and adjusted based on site-specific information and professional judgement to inform the Natural Range of Variation model.

Comment: The Ecological Sustainability Analysis is based on faulty models and assumptions and do not satisfy requirements of the Forest Planning Rule. The DEIS and Appendix C of the DEIS fail to adequately disclose how Spectrum model outputs compared to NRV references are used in the analysis of species habitat. However, it is clear that habitat predicted from the Spectrum model are compared to habitat predicted with the NRV model. We were shown charts during a “Species Analysis Deep Dive” that showed the derivation of scores for species groups based on comparison of habitats predicted from the Spectrum model to habitat predicted with the NRV model. These tables are not found in the DEIS or in Appendix C.

The Species analysis is unreliable because it is based on model outputs that are in error. As a result, the Forest Service lacks a rational basis to conclude that any of its alternatives will meet the diversity requirements of NFMA and the planning rule.

Response: See responses above for more information about NRV and Spectrum, how they were built using the best available scientific information, and how they were used in the analysis to inform the forest plan decision. Between the draft and final EIS, the Spectrum model was updated to reflect changes in assumptions between draft and final, as explained in other responses. The EIS’ Terrestrial Ecosystems Forest Structure sections have been updated to reflect updated modeling which includes greater natural disturbance frequency in Alternative E.

The FEIS, Appendix C documents the associations of each species included in the ESE with one or more coarse filter elements. Each of these coarse filter elements has one or more relevant indicators (not all of which are reliant on vegetation modeling). Each of these indicators is weighted based on relevance to the coarse filter element and composite scores (weighted averages) are estimated. The ESE Tool (model) is not a precise analytical tool, but rather a guide to demonstrate direction of change, and to a limited extent, the potential magnitude of that change. Additional information on each indicator, including the weights of the composites scores is available in the project record. Providing complete information for each indicator is too voluminous to include in the FEIS and Appendices.

PLANT AND ANIMAL DIVERSITY

Comment: The Plan relies too heavily on the landscape- level changes that will occur in the effort to move the Forests towards a more natural state, and as a result it does not fully consider impacts to species or address how those impacts would differ under each alternative. The coarse filter components

are not sufficient to account for all significant species issues, and the fine filter elements do not adequately fill the gaps in species protection.

Response: The Forest Plan is a landscape-level planning document and effects to species are considered at a programmatic scale. Effects to species from individual actions will be analyzed at the site-specific project level.

Comment: The Plan does not demonstrate how it will contribute to the recovery of federally listed threatened and endangered species.

Response: The final EIS and Biological Assessment consider effects to federally listed species under the programmatic framework of the revised forest plan.

Comment: The EIS does not include sufficient information regarding the Ecological Sustainability Evaluation (ESE) tool and associated analysis and therefore, there is insufficient information to comment on impacts to sensitive species.

It is not at all clear how the Spectrum model outputs were incorporated in the ESE tool.

Response: All processes and intermediate analysis and results are included in the Project Record. Results from the ESE Tool are summarized in Appendix C and Chapter 3 of the EIS.

Comment: The ESE tool assigns a relative weight to indicators for species based on assumptions that certain indicators or outcomes are more or less strongly associated with that particular species' needs to remain viable on the forest. However, no weighting element is included with regard to ecozones or unique habitats. If a species can be associated with multiple ecosystems but prefers or needs certain ecozones over others, the model is incapable of telling the difference.

Response: This is an inherent shortcoming of the ESE Tool. This level of detail is presented in the Chapter 3 effects analysis in the EIS. In this text, coarse elements most relevant to the species are discussed separately from the broader discussion.

Comment: Clarification should be provided as to why some indicators are restricted to USFS lands and other indicators apply to all lands.

Response: This is done in the aquatics section, in response to feedback from collaborators that because of fragmented ownership across the landscape, it is important to demonstrate that most (but not all) potential threats to aquatic resources do not originate on the Forests.

Comment: The overlap between elevation, range, ecozone, structural type, and/or other habitat elements must be considered.

The ESE model inflates the benefits to species of management on a forest-wide scale. Because the ESE methodology does not capture the needs of species that are not adequately defined by ecozone or structural type and age class, it does not satisfy the requirement of an impacts analysis for species under NEPA, nor does it demonstrate for NFMA purposes that the Draft Plan "contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and

maintain a viable population of each species of conservation concern within the plan area." 36 C.F.R. § 219.9(b)(1).

Response: Elevation, range, ecozone, structural condition, and other habitat characteristics are addressed through ecosystems and species groups across these strata. Some species are associated with more than once species to display broader associations.

The ESE Tool is a landscape-level planning tool. Results are not meant to be applied at the project level. Project-level decisions will use data and information relevant to that scale.

Comment: The DEIS provides no analysis of the impacts to NHNA values that would occur. The ESE tool model should have incorporated NHNAs at the coarse filter level to ensure impacts to these species, and to the NHNAs themselves, were considered.

The Forest Service failed to consider impacts to species that occur within NC Natural Heritage Natural Areas (NHNAs). The ESE tool does not account for the interaction between land allocation for suitable timber harvest and distribution of NHNAs.

Response: NC NHNAs are not a Forest Service designation, therefore they do not have their own section in the FEIS. The resources present in the NHNAs – the forest communities, unique habitats and rare species that NHNAs contain - are analyzed in detail in the Terrestrial Ecosystems section of the EIS.

The distribution of NC Natural Heritage Natural Areas by alternative was documented in the project record; it was not included in the EIS because the Terrestrial Ecosystem analysis considered the resource elements that characterize Natural Areas. Analysis contained within the project record demonstrates that the Forest considered NHNA values (i.e. rare species supported). While this information was not used in the ESE, it did contribute to the EIS analysis and discussion.

Additionally, NC Natural Heritage Natural Areas have value ratings that range from 'General' to 'Exceptional' and most of the 'Exceptional' NHNAs were included in the Special Interest Area MA. Alternative E includes additional acres in SIA compared to Alternatives A, B, C, and D. Several EIS sections analyze the effect of resource management on Special Interest Areas.

Comment: Commenters were concerned about how management for unique habitats and rare species in state Natural Heritage Natural Areas would impact the ability to actively manage in Wildlife Habitat Active Management priority areas.

Response: Natural Heritage Natural Areas (NHNAs) that are ranked as 'Exceptional' by the Natural Heritage Program were evaluated and many were allocated to the Special Interest Area MA in the final Plan. The amount of overlap between state NHNAs and WHAMA priority areas for golden winged warbler, cerulean warbler, elk, and ruffed grouse is not substantial and will not impact habitat enhancement and restoration for these species on the Forests. The Forest Plan includes desired conditions, guidelines and management approaches to coordinate with the NC Wildlife Resources Commission and that Natural Heritage Program when managing habitat for plant and animal species (including within NHNAs and WHAMAs).

Comment: The EIS does not adequately consider the effects of high road density on salamanders. The Forest Plan should adopt an objective that prohibits forest management and road construction from creating barriers to the movement of salamanders.

Response: The Transportation and Access section of the forest plan includes a desired condition (TA-DC-08) and standard TA-S-04 to ensure that road and stream crossings are not an impediment to the passage of native aquatic species. The Aquatic Systems section includes a standard that requires road and trail stream crossings to be designed so that they do not permanently isolate populations of native species.

A species group was added in the ESE tool for dispersal limited species such as salamanders. Effects to this species group are summarized in Chapter 3 of the FEIS.

Comment: The ESE tool does not provide adequate information to meaningfully differentiate between alternatives. The ESE tool analysis does not capture differences of where management takes place on the forest based on the inputs used, and as such does not represent meaningful consideration of how those impacts differ between alternatives. The ESE tool analysis obscures differences by focusing only on plan components rather than spatial differences between alternatives.

Response: Because the forest plan provides a programmatic framework, large differences between alternatives were not anticipated. Alternatives were carefully crafted to incorporate results of several years of collaboration and as a result, are not largely different at the landscape scale. Spatial differences are considered during smaller scale, project-level assessments during plan implementation.

Comment: The Plan fails to demonstrate how it contributes to the recovery of federally listed threatened and endangered species. The generic coarse filter plan components are not sufficient to show contribution towards recovery. The plan components, whether ecosystem-level or species-specific, must "provide the ecological conditions necessary to: contribute to the recovery of federally listed threatened and endangered species." 36 C.F.R. § 219.9(b)(1).

Response: The Endangered Species Act requires project-level consultation on federally listed species. This process will ensure that incidental take is minimized or eliminated for every project. The USFWS will issue a Biological Opinion on the status of each relevant federally listed species.

The BA and final EIS display plan components directly and indirectly contributing to the persistence and recovery of each federally listed species relevant to the Forests.

Comment: The plan component for the incorporation of species recovery plans should be a standard instead of a non-mandatory guideline.

Response: A guideline is a constraint on project or activity decision making that allows for departure from its terms as long as the purpose of the guideline is met. The 2012 Planning rule requires that project-level planning and implementation be consistent with the intent of guidelines. When this intent is required by law, regulation, or policy, it is mandatory.

Comment: We recommend expansion of streamside buffers, which are currently insufficient. This will reduce the risk of sedimentation and siltation in streams, which are major threats to aquatic species.

Response: Plan direction for Streamside Zones has been updated in the Final Plan. See the response to comments in the Streamside Zones section of this Appendix for more detail.

Comment: Information about occurrences for many SCC is outdated or insufficient to make conclusions about persistence and recovery in the Plan.

The plan should adopt a standard establishing what will happen when new occurrences of SCC are found during project design and implementation and how that information will be shared outside of the agency. Similarly, a plan component should be developed to address what will happen when new areas of special biological significance are found.

Response: The Forest Service receives rare species element occurrence data updates from the NC Natural Heritage Program quarterly. Most DEIS analyses used 2017/18 NC Natural Heritage Program data. Several FEIS analyses were updated to use 2020 data. Project level analysis uses the most updated element occurrence data provided by the NC Natural Heritage Program and completes field surveys when needed.

Comment: Extensive comments expressed concern for protection of rare species and requested that additional plan direction be included to assure that timber harvest and road construction do not adversely impact rare species and communities.

Response: The Forest Service recognizes the important role that national forests provide for rare species and communities. Law, regulation, and policy requires us to protect, conserve and enhance rare species and their habitats regardless of where they occur on the landscape. The Ecological Sustainability Evaluation (ESE) tool contains approximately 1,046 plant and animal species, including federally listed species, Species of Conservation Concern, other rare species, and demand species. Impacts to these species were analyzed using the ESE tool and summarized in Appendix C.

OLD GROWTH

Comment: Many commenters were opposed to additional old growth designations because the forest is already aging and old growth areas are already present in management areas that don't allow for active management like Backcountry, Wilderness, and Inventoried Roadless Areas. Additional old growth designations would result in less suitable acreage for forest restoration and would prevent meeting other Forest Plan objectives and desired conditions such as wildlife habitat improvement and providing economic benefits to local communities.

Making future selections for old growth during project planning would most likely result in even less suitable acreage for forest restoration and wildlife habitat improvement.

Response: The EIS analyzes a range of alternatives regarding the designation of the old growth network and consideration of additional old growth areas at the project level. Alternative E was developed in response to public comments received on the draft EIS, and includes additions to the Designated Old Growth Network where creation of young forest is unlikely to be prioritized, including designated wilderness, wilderness study areas, recommended wilderness, research natural areas and the corridors of designated wild and scenic rivers that are classified as wild. Additionally, areas that have been inventoried as having old forest were included in the OG

network in Alternative E. These additions strategically enhance the network's resiliency and ecological diversity. Additions were reviewed by FS specialists in consideration of other needs in the area (ex: management in the Trail of Tears, needs for realignment of unsustainable trails, wildlife habitat management priorities, etc). Therefore, it is unlikely that the final Designated Old Growth Network footprint would impact opportunities for restoring young forest, creating wildlife habitat, or providing economic benefits to local communities.

Comment: Many commenters wrote in support for protecting all existing old growth and for including additional old growth areas in the designated old growth network as they are identified during project planning.

Specific values that commenters attributed to old growth forests include unique and rich biodiversity, carbon sequestration, contribution to healthy soils, wildlife habitat, resilience in the face of global warming and climate change, and contribution to state tourism and recreation. Commenters note that old growth forests are rare on the landscape and that they provide a unique visitor experience that should be preserved for future generations.

The future old growth network should include backcountry, wilderness, and other similar areas to allow these areas of the forest to mature into old growth forest over the long term. All existing old-growth forests should be placed in the designated old growth network and extraordinary areas should be considered for Special Interest Area or Research Natural Area management.

Response: The Forest Service agrees that old growth conditions are currently underrepresented on the landscape and the revised plan recognizes old growth forests as a valuable natural resource worthy of protection, restoration, and management. There are a variety of perspectives on how to manage for the development of old growth characteristics, therefore the EIS analyzes a range of alternatives regarding the designation of additional old growth areas.

The old growth network identified in Alternative E includes areas where creation of young forest is unlikely to be prioritized, including designated wilderness, wilderness study areas, recommended wilderness, research natural areas and the corridors of designated wild and scenic rivers that are classified as wild. It also incorporates information from nongovernmental organizations and the NC Natural Heritage Program about the presence of existing old growth, and additions were added to the designated OG network to strategically enhance the network's resiliency and ecological diversity, further described in Chapter 3 of the EIS. The resulting network includes 291 separate patches totaling about 265,000 acres that represent approximately 25% of the Nantahala and Pisgah NFs. As a result, Alternative E provides the largest OG network of any alternative and increases overall patch sizes and connectivity.

While portions of the Designated Old Growth Network do not currently possess old growth characteristics, management direction in the Forest Plan will allow these areas to develop old growth characteristics over time. Beyond the designated network, other portions of the forest in the Backcountry management area and the Special Interest Area management area currently have old growth characteristics which will continue to develop over time. These management areas were analyzed for patch resiliency and redundancy in all five alternatives. The total size of these management areas that are trending toward older forest varies from 34-43% of the forest by alternative.

The Forest Service does not have an inventory of all the lands on the forest that currently contain old growth characteristics. The EIS evaluates several alternatives for addressing whether and how to make adjustments at the project level to incorporate old forest into the Designated Old Growth Network during project level planning, including additions based on watersheds. More information on how alternatives respond to the range of perspectives on this topic is included in the response below.

Comment: Ground surveys conducted by conservation groups from 1995-2017 incorporated the Davies (1996) historically mapped old growth sites. These surveys were provided to the Forest Service during the planning process. However, the old growth network in the DEIS remains deficient in capturing mapped sites and they should be included in the preferred alternative. This is the best information available on existing old growth. Rather than being treated as critical information for environmental analysis, it is included in only one alternative as a nod to the "social spectrum" of opinion on old growth. The Forest Service has possessed these data for years - most of it for at least a decade. This should have been ground truthed by the Forest Service years ago. Providing for ground truthing old growth now, at least as a monitoring objective, is absolutely essential in meeting the BASI requirements and verifying modeling projections. Without ground-truthing age classes for model calibration, old growth assumptions cannot be relied upon and comparisons of Spectrum model outputs to NRV model baselines cannot be relied upon.

Response: The EIS states that the Forest does not have a complete inventory of old growth conditions on the ground. In addition to Alternative C, which includes information provided by conservation groups on mapped old growth sites, Alternative E also uses this information in the development of the larger designated old growth network. Alternative E = incorporates many of the areas that were mapped by conservation groups and provided to the Forest during the planning process. Some of these areas were validated on the ground but a forestwide field validation of old growth is not feasible nor necessary for the Forest Plan which is a programmatic document. The Final Plan includes a monitoring question to evaluate old growth characteristics within the designated old growth network.

While the NRV and Spectrum models are not perfect, they are based on best available science and rely on an inventory of age classes across the forests to inform future management. Our understanding of old growth systems and age classes will improve as additional data is gathered through monitoring and project level analyses. In the future, this may inform updated modeling for forest planning.

Comment: Commenters expressed a variety of perspectives on ECO-S-28, which was the proposed standard in Alternative B, C, and D that identifies how project level information would be used to adjust the designated old growth network at the project level. This standard was different in all alternatives.

Some commenters favored establishing the complete the designated old growth network at the plan level to provide for certainty. Supporters of setting the network at the plan level stated that identifying the designated network in the plan reduces the analysis at the NEPA project level, improving project efficiencies.

Others favored project level adaptability, stating that old growth is not static on the landscape, it is not well inventoried, and that the best location for the designated network may need to move during the life of the plan.

Still others advocated for a cap-and-trade style designated old growth network where the overall size of the network is established (capped) in the Plan, but individual patches are adjusted during projects. Conceptually, this approach would allow for high quality existing old forest or old growth to be added to the network when it is found during project level planning, while patches with lower old growth potential that are in the network could be removed from the network for other types of multi-use management. Comments provided different approaches for setting the cap, and different methods for identifying patches to add to or remove from the network.

Response: The DEIS alternatives reflected a range of approaches on this topic, including Alternatives A, B, and D that allow for continued adjustments at the project level with different criteria, and Alternative C which sets the designated old growth network at the plan level without project level adjustments.

After considering public comments and the DEIS findings, Alternative E took a hybrid approach that adds acreage to the Designated OG Network at the plan level, in lieu of future adjustments. In Alternative E, more than 54,000 acres of additions were added to the designated OG network to strategically enhance the network's resiliency and ecological diversity. Alternative E's additions to the Designated Old Growth Network include areas where creation of young forest is unlikely to be prioritized, including designated wilderness, wilderness study areas, recommended wilderness, research natural areas and the corridors of designated wild and scenic rivers that are classified as wild. Additional patches were included with consideration of the full range of biodiversity representation, using ecozone representation, moisture and elevation gradient diversity, as well as spatial distribution and redundancy. The adjustments focused on increasing overall patch size for resiliency, overall diversity, and contribution to an efficient network. At more than 265,000 acres, Alternative E would provide the largest network of any alternative, increasing overall resiliency and connectivity but does not provide for adjustments the network at the project level. This addition to the old growth network is greater than what would otherwise be added to the network under the existing plan (Alternative A), which is estimated to be about 7-10,000 acres in the next 10 years.

The effects of these different approaches are analyzed in the FEIS, Chapter 3, Designated Old Growth Network section.

Additionally, all alternatives recognize that outside of the designated network, many places on the Forests will continue to age and progress to old growth conditions over time. The EIS analyzes management areas outside the designated network that primarily have passive management and would acquire old growth characteristics over time. A cap-and-trade process for old growth management was not considered in detail because there is strong disagreement regarding the starting point acreage for that network, and disagreement on the criteria for adding or removing patches from the network. Some advocated for adding to the network based on local conditions, others suggested it should be based on the management area assignment. A cap-and-trade style method is untested, would require additional level of project surveys for old growth characteristics, and would likely be regularly challenged.

Comment: The Forest Service should conduct field based old growth inventories to better quantify the extent of existing old growth on the forests. Old growth conditions should be assessed during initial stand exams, following the George Washington National Forest's protocols or collaboratively developed protocols locally for the Nantahala and Pisgah NFs.

Response: Forestwide inventories for old growth across the 1.04 million acres of the Nantahala and Pisgah NFs would take an extensive amount of time beyond what is achievable during the revision process. The Forest Service used best available science to identify an old growth network that is representative of all ecozones and distributed across the Forests in large patches. Old growth inventory data from non-governmental organizations and the NC's Natural Heritage Program's Natural Heritage Areas were used to inform the designated network.

Comment: Several commenters provided input on old growth terminology and requested that the Forest Plan and EIS provide clear definitions of old growth and should distinguish between old growth ecosystem characteristics and the old growth age-class. The Forest Service needs to be clear about which definition they are applying throughout the Plan and EIS.

The DEIS introduces new terminology instead of using Region 8 Old Growth Guidance terminology established to guide how the old growth issue is addressed during Plan revisions.

When considering additional patches to add during project level analysis, the Forest Service should use the definition of old growth that describes ecosystem characteristics.

The lack of consensus around a single definition for old growth creates room for interpretation at the project level and makes building consensus among forests user interest groups difficult if not impossible.

Response: The Final Forest Plan includes a glossary of terms and the FEIS distinguishes between old forest, current old growth, the designated old growth network, and the old forest trending landscape. These definitions provide clear distinction between forest with old growth characteristics, versus old forest that has reached the minimum age to be considered old growth, known as old forest. Regardless of whether these terms appear in the Region 8 Old Growth Guidance from 1997, these terms were all included in the 2021 EIS analysis to provide clarity. While the Forest Plan identifies a designated old growth network that will be passively managed to allow for the development of old growth characteristics, not all lands within the designated network currently have old growth characteristics.

Comment: Comments suggest adding stream buffers and areas identified as having high concentrations of threatened and endangered species to the old growth network because they have minimal management and will likely present old growth characteristics over time.

The old growth network should include management areas that can act as connectors within the old growth network, such as stream corridors, the Appalachian Trail Corridor, the Blue Ridge Parkway, etc. These management areas have minimal management and would contribute to the old growth trending landscape.

Response: The Chapter 3 EIS Designated Old Growth Section includes analysis for connectivity looking at the AT and WSR corridors. While these areas are not included in the designated old growth network (except for Alternative E which includes the wild classification corridors of

designated Wild and Scenic Rivers), these lands will provide connectivity of old forests conditions across the landscape and develop old growth characteristics over time. Additionally, the analysis of each alternative considered the location of rare species occurrences related to the size and configuration of the designated old growth network and old forest trending landscapes.

Comment: For ECO-S-29 (road construction in old growth), we ask that you make the standard more specific to prohibit new road construction except in limited (and named) circumstances.

Response: The Forest Plan intentionally does not prohibit road construction in the designated old growth network but recognizes that this would only occur in limited circumstances. Final Plan direction, OGN-S-03 specifies that road construction would be allowed only after all feasible and prudent alternatives have been analyzed and impacts to old growth characteristics are minimized.

Comment: Specific plan-level standards and guidance should be written for identified old growth patches within Matrix and Interface management areas.

Response: The Forest Plan includes desired conditions and standards that are specific to the designated old growth network which overlaps with multiple management areas, including Matrix and Interface MAS.

Comment: The Forest plan should clarify that adding a patch to the network does not mean that there is no need for management. Treatment may be prescribed in a newly added patch to maintain or restore the stand's old growth characteristics or to benefit Species of Conservation Concern (SCC), for example.

Response: The Forest Plan includes a standard (OGN-S-01) that identifies appropriate vegetation manipulation that could occur in the designated old growth network to enhance old growth values or characteristics.

Comment: The DEIS estimates up to 540,000 acres of old growth are needed to achieve our natural range of variation (NRV). Yet each of the plan alternatives barely achieves half of that.

Response: Forest Plan desired conditions describe the goals and outcomes of forest management and the ecological, social, and economic attributes that a forest can achieve over the long term, rather than a single planning cycle. Old growth conditions take decades to develop and desired conditions will not be achieved in a single planning cycle.

NRV estimates included in the plan were aggregated by combining multiple ecozones, but to look at a single number for targeting old growth misconstrues the complexity of needing to ensure that all ecozones have represented old growth characteristics in both open and closed canopy states. Further, Natural Range of Variation estimates of acres needed over multiple planning cycles may not be attainable in modern times because ecosystem characteristics dominant in historic times are different today (such as the loss of American chestnut, decline of Fraser fir and eastern hemlock from insect pests, change in fire regimes, hydrology etc.) The EIS analysis demonstrates that some of these acreages may not be attainable in modern times because landscape conditions have changed from NRV. The final plan clarifies that approximate

numbers of acres forestwide acres were informed by the NRV modeling of separate ecozones but are not a forestwide target, or objective in and of themselves.

When deciding on the size and configuration of the designated old growth network under different alternatives, the analysis considered other methods of ensuring ecological integrity beyond NRV. In particular, the EIS analysis considered representativeness of ecozones, moisture classes, elevation gradients, and habitat for rare species; and redundancy of patch sizes across forestwide geographic distribution when establishing a designated old growth network that would provide for the development of old growth characteristics over time. The analysis in Chapter 3 of the EIS describes the representativeness and redundancy of each alternative.

Alternative E, which was developed in response to comments, substantially increases the designated old growth network through the addition of over 54,000 acres. This addition to the old growth network is greater than what would otherwise be added to the network under the existing plan (Alternative A), which is estimated to be about 7-10,000 acres in the next 10 years.

Under all forest plan alternatives, the forests are aging into the old forest successional classes and toward the desired condition range of old forest per ecozone. Depending on ecozone, the net annual gain of older forests varies from dry to mesic types (see old forest structural class and individuals ecozones, in the terrestrial ecozone section of the EIS). While the Designated OG Network emphasizes the development of high-quality old growth as a primary goal, there is an additional portion of the Forests outside the network that is aging toward old forest conditions. The Forest Plan includes a monitoring question to evaluate what old growth characteristics are accruing in the designated network over time and allows adaptive management in the decades to come.

In addition to the establishment of a designated old growth network, long-term management strategies are needed to ensure dynamic landscape populations of old growth that are able to withstand wildfire, parasites, diseases, human disturbances, and climate change. The action alternatives include a Tier 2 objective to enhance or accelerate the development of old growth characteristics through activities such as increasing downed woody debris, creating woodlands in appropriate ecozones by thinning and prescribed burning, enhancing the composition of native species, creating snags by girdling trees, and harvesting products as a side benefit of removing uncharacteristic vegetation.

Comment: To align with the agency's timber production suitability analysis determination, the Forest Service should include a Plan standard that clarifies that designated old growth is unsuitable for timber production.

The agency must correct an error in its timber calculations. In Alternative B, designated old growth patches are included as commercially viable acreage. This error skews the comparison of alternatives, so it must be corrected in the Final EIS.

Response: A standard was added in the final Forest Plan to identify that lands in the designated old growth network are not suitable for timber production. The Plan also includes a standard in the Old Growth Network section that clarifies the specific situations where vegetation

manipulation would be allowed within the Old Growth network. The Old Growth Network was not included in timber suitability calculations in the FEIS.

Comment: The DEIS does not provide a connectivity analysis for old growth patches.

Response: A connectivity analysis with the old growth network and the older trending forest was completed with two landscape corridors, the Appalachian Trail and wild and scenic river (WSR) corridors. The Appalachian Trail Corridor is distributed across the Nantahala and Cheoah Ranger Districts south of the Great Smoky Mountains National Park (GSMNP) and through the Appalachian Ranger District north of the GSMNP. The three WSR corridors were smaller occurring away from the AT on the Nantahala, Pisgah, and Grandfather Ranger Districts. A comparison of all the old growth alternatives by patch size was completed with these corridors within the DEIS and the FEIS.

WILDLIFE

Comment: Extensive comments expressed support for active management, including timber harvest, to support healthy diverse wildlife populations that depend on young forest conditions, edge habitat, and structurally diverse forests.

Response: The Forest Service recognizes the important role that national forests provide for diverse wildlife populations the need for increasing the amount of young forest habitat across the Nantahala and Pisgah NFs. The Forest Plan includes direction to provide young forests in strategic locations that benefit species that are dependent on these habitats which are in short supply. The objectives for young forest creation are higher in all action alternatives compared to the existing Forest Plan and the Tier 2 level objectives identify what is possible with the help of partners and additional resources.

Comment: The Plan should have a higher prioritization on wildlife. Healthy, abundant wildlife populations have a direct impact on 3 of the 4 land management themes in the forest revision plan including: Sustaining healthy ecosystems, partnering with others and connecting people to the land.

Response: The Forest Service recognizes the significant role that the forest plays in managing habitat for a diversity of game and non-game wildlife species. The final plan separates the wildlife desired conditions, standards, and guidelines from the Terrestrial Ecosystems plan components under the heading of Wildlife. Wildlife Habitat Active Management Areas (WHAMAs) are identified in the forest plan and prioritized for appropriate management to enhance wildlife habitat characteristics throughout the forest plan.

Comment: Support for active forest management, including timber harvest, which provides habitat for ruffed grouse, woodcock, deer, turkey, and other non-game birds and animals. Concern about declining ruffed grouse populations and the loss of hunting opportunities in western NC as game populations decline on public lands.

Response: All alternatives in the EIS recommend forest management (timber harvest or other silvicultural objective, and/or prescribed fire) to support young forest conditions. In addition, wildlife habitat active management areas (WHAMAs) have been identified and prioritized for ruffed grouse. The Forest Service will continue to partner with the NC Wildlife Resources

Commission, the Ruffed Grouse Society, and other partners during plan implementation to enhance habitat for demand species.

The southern Appalachian Mountains, including the Nantahala and Pisgah NFs, are on the southern edge of the ruffed grouse's natural range. Any forest management prescribed and implemented for this species should consider the influence of this edge on population dynamics to ensure biological and social expectations are met.

Comment: Comments in opposition to the creation of young forest habitat for game species such as turkey, deer, and grouse, suggesting that most game species have stable or increasing populations. Other commenters suggest that the objectives for young forest habitat should be associated with recreation and access as opposed to wildlife populations.

Response: Chapter 3 of the EIS describes population trends for demand species. Game species populations on the Forests are declining, while populations on other ownerships are increasing. This decline is due in part, to a lack of suitable habitat on public lands, which is a result of a decrease in vegetation management over the last several decades. Most of the game species in North Carolina are disturbance dependent, and therefore decline under less frequent disturbances (both natural and anthropogenic).

Public lands are the only ownership that provides access for all of the public to hunt; therefore, it is important to manage lands for the persistence of these species at levels that can support and sustain hunter harvest.

The Forest Service manages wildlife habitat conditions while the North Carolina Wildlife Resources Commission describes wildlife population objectives in relevant species management plans. Objectives in the Forest Plan are tied to wildlife habitat management.

Comment: The Forest needs much higher acreages of young forest and open forest conditions than the Plan proposes. The NCWRC 2016 Bird Matrix analysis shows that 83,000 - 134,000 acres of young forest are needed to provide the structural habitat necessary to support many wildlife species such as: golden-winged warbler, ruffed grouse, woodcock, as well as the Appalachian cottontail. The DEIS estimates that roughly 13,000 acres will soon age out of young forest and more than 4,500 acres of existing young forest will age out in 10 years - so these targets need to be greatly increased.

Response: The final plan recognizes the importance of young forest habitat for a diversity of wildlife species. The final plan includes objectives for regeneration and thinning on 2,200 acres annually (Tier 1) or up to 4,700 acres annually (Tier 2).

Comment: Commenters expressed support for daylighting along system roads (2-5 miles of road annually within NCWRC Wildlife Habitat Management Areas) and support additional daylighting work outside of WHAMAs, particularly within the Matrix management area, to achieve YF goals across ecozones and elevations of the Forest. Daylighting should be achieved using both commercial and non-commercial treatments such as mastication.

Response: The objective for daylighting along roads emphasizes roads within WHAMAs but is not intended to be exclusively within WHAMAs.

Comment: The impact of deer populations on the success of regeneration (both natural and after harvest) are well documented and can have landscape level impacts on the pace of recovery and desired conditions, and so a wholesale approach to increase numbers with no targets, caps, or desired population goals is problematic.

The Forest Service must address the problems associated with the ever-increasing white-tail deer population. Although these animals are admired by many, they are doing irreparable damage to our forests and need to be brought into balance.

Response: Deer populations on public lands (e.g. the Forests) are declining, while populations on other ownerships are increasing. This decline is due in part, to a lack of suitable habitat on public lands, which is a result of a decrease in vegetation management over the last several decades. Public lands are the only ownership that provides access for all of the public to hunt; therefore, it is important to manage lands for the persistence of these species at levels that can support and sustain hunter harvest.

Comment: The plan should include stronger standards for protecting rare, threatened and endangered species as well as dispersal-limited species.

Successfully keeping such at-risk species from needing to be listed could benefit forest landowners statewide in terms of avoiding additional forest management restrictions. We encourage close coordination with the N.C. Wildlife Resources Commission and the recommendations outlined in the North Carolina Wildlife Action Plan.

Response: The Forest Plan includes coarse and fine filter plan components to assure the persistence of rare species. All proposed projects on the national forests must adhere to all laws, regulations, and policy concerning effects to rare species.

The forest plan includes management approaches to consider the NC Wildlife Action Plan (Management Approaches in the Plant and Animal Diversity section); therefore, specific recommendations in the NCWAP are incorporated by reference.

Comment: Incorporate the Ruffed Grouse Conservation plan guidelines in project design. Grouse projects should create young forest above 3,500 feet elevation and will ideally include mesic sites dominated by mast producing overstory tree species. Where appropriate, include daylighting of roads between regenerating stands to provide movement corridors.

Response: The Forest Plan includes desired conditions for a distribution of young forests across ecozones and elevations but particularly at higher elevations for species such as ruffed grouse, golden-winged warbler, white-tailed deer, and elk. The final plan includes management approaches for wildlife habitat diversity that emphasize young forest habitat treatments at elevations above 2,500 feet and young forest habitat creation in NCWRC Wildlife Habitat Active Management Areas (WHAMAs) focal areas.

The Forest Plan includes Tier 1 and Tier 2 objectives for daylighting roads, with an emphasis on closed roads within North Carolina Wildlife Resources Commission Wildlife Habitat Active Management Area priority areas (TA-O-05).

Comment: The Matrix MA should include language in MAT-DC-05 to daylight up to 50' on each side of linear wildlife openings.

Response: The Forest Plan, Transportation and Access section includes objectives to daylight roads within NC Wildlife Resources Commission Wildlife Habitat Active Management Area priority areas to create young forest conditions. Additionally, the Plan includes a management approach in the Transportation and Access section to consider daylighting and seeding roads to maintain them as linear wildlife openings when appropriate for the management area, ecozone, and site-specific conditions.

Comment: The forest plan should include additional language to provide habitat for elk on the forests, consistent with NCWRC's Elk Management Plan.

How is the need for these management activities justified by the scientific literature on elk biology?

How would the elk management prescription compliment or conflict with other restoration goals for the Forests and can the forests support a greater population of elk?

Response: A new desired condition for elk habitat conditions was added to the final plan. An emphasis on providing open grassy and herbaceous areas for foraging, both permanent and ephemeral, as well as an increased emphasis on open forest conditions will benefit elk populations on the Forests by providing quality foraging and cover habitats. Within the wildlife habitat active management area (WHAMA) for elk, the intent is to facilitate improved habitat conditions for an expanding elk herd on the Forests. Elk habitat and herd management will be best achieved through partnership between the Forest Service, NCWRC, and other organizations.

Monitoring data provided by both the Great Smoky Mountains National Park and NCWRC indicate that the existing elk herd is expanding. The intent of the forest plan is to provide enhanced habitat for elk, partly to facilitate herd expansion, and partly to mitigate damage done to private lands from elk expansion.

Habitat requirements for elk are not unlike many other species on the Forests; they require a diversity of habitat conditions within proximity of each other for persistence. It should be noted that this concept is directed towards the wildlife habitat active management area (WHAMA) developed by the NCWRC, and not the entire Forest. This WHAMA was identified using current knowledge and elk herd data.

Comment: Some larger wildlife openings, at least 10 acres but preferably 20, are desirable for golden-winged warblers (GWWAs) and other wildlife. We recommend revising ECO-DC-22 with the following addition: "Larger openings to support multiple territories of GWWA will be considered in GWWA priority areas."

This desired condition should include turkey in the list of species that benefit from permanent grass, forb and shrub openings.

Response: The Forest Plan acknowledges the need for larger openings to support golden-winged warblers in Table 3, Characteristics of Young Forest Habitat.

Wild turkey has been added to the desired condition for wildlife openings

Comment: The plan should adopt the guidelines outlined in the Golden-winged Warbler International Working Group policies for best practices in creating GWWA habitat, including the additional limitation that habitat creation be limited to within 2 miles of known GWWA occurrences.

Response: The final plan includes a management approach in the Integrated Ecosystem and Wildlife Habitat section to follow recommended best management practices for golden-winged warblers and cerulean warblers.

Comment: The forest plan should include plan direction that management in the cerulean warbler focal area will not focus on young forest creation but instead on enhancement of habitat conditions suitable for cerulean warbler.

Response: The Forest Plan includes desired conditions in the Wildlife section for cerulean warbler, noting that mature forests, including late seral and old growth, are the appropriate habitat for the species.

Comment: We recommend that the Forest Service adopt post-project monitoring at sites created to benefit GWWA to determine actual population response to restoration efforts.

Response: The Forest Service will continue to monitor migratory birds and will continue to contribute to other monitoring efforts for golden-winged warblers.

Comment: ECO-DC-25 inaccurately identifies old growth as optimal habitat for wild turkey, deer, and bear.

Response: Old growth forests provide forage and habitat for a diversity of wildlife species. The desired condition was edited to remove the word 'optimal' as this is not the optimal habitat for species such as deer and wild turkey.

Comment: Table 7, Forestwide Desired Amounts of Wildlife Habitat Types is not inclusive of the wildlife species associated with the different habitats.

Table 7 should not be a desired condition for the amount of habitat types and it oversimplifies the seral and age class distribution

Response: The list of species identified in Table 7 (Final Plan Table 3) are representative of the habitat types presented but the lists not all-inclusive. Several species have been added or deleted from the table based on specific comments.

The table has been renamed to clarify that the intent of Table 7 is to summarize key wildlife habitat characteristics. The desired amount and type of habitat conditions are a result of Natural Range of Variation and FVS modeling, which are based on current landscape conditions.

Comment: The plan should acknowledge the necessity of young forest for species commonly associated with old growth forest including cerulean warbler, wood thrush, and roosting bats. Peer reviewed research concludes the necessity of adjacent regenerating clearings to these species. Specifically, amend Table 7, Plan p.72, Associated Species to include all species that use the habitat identified.

Response: The list of species associated with habitats has been updated in the final plan; however, the list of associated species is not all-inclusive. The EIS analysis of disturbance, gaps, and associated wildlife species recognizes that many wildlife species require a suite of habitat conditions in proximity to each other to persist.

Comment: The NCWRC recommends edits to ECO-DC-30 to recognize the need to address populations of game species more comprehensively.

Response: The suggested language was adopted; this DC is under the heading of Wildlife in the final plan, WLF-DC-09.

Comment: Various edits to ECO-S-30 were recommended, including adding a bullet to retain soft mast species such as mulberry, service berry, dogwood, etc.; retain large snags; reference additional species that are beneficial to bats such as white oak, yellow pine, and yellow birch; add ruffed grouse to bullet ii.

Response: This standard was edited to include additional tree species that are beneficial to bats and ruffed grouse was added to bullet ii. Specific soft mast species are already included in this standard as species to emphasize under bullet ii. The retention of snags is addressed under bullet i. This standard was moved under the heading of Wildlife in the final plan, WLF-S-01.

Comment: The Plan should make specific recommendations for management of various wildlife species such as woodcock, mountain rabbit, migratory and native birds.

Response: The analysis of wildlife for the Forest Plan includes 375 native animal species in the Ecological Sustainability Evaluation (reference EIS Appendix C). The forest plan and EIS follow a coarse and fine filter approach to analysis. Individual species are not addressed unless analysis shows that coarse filter elements do not provide for the species persistence and additional fine filter plan components are needed.

Comment: The DEIS fails to provide an adequate analysis to show that connectivity will be preserved, and to show that the harmful impacts of new road development to facilitate drastically increased active management do not undermine the purported ecological benefits of the increased active management. The national forest should be managed with a focus on connectivity to provide migratory corridors for plants and animals.

Connectivity cannot simply be maintained at the coarse-filter level via vegetation management and very general ecological sustainability scores. Connectivity maintenance requires proper analysis using species-specific trigger points and population viability assessments (see Noon et al. 2003, Schultz et al. 2013) necessary to meet the BASI requirement of the 2012 forest planning rule.

The DEIS fails to identify specific areas of the forest that must be protected from roads and active management to ensure species viability.

Response: The final EIS analyzes the potential effects of open roads and trails, as well as potential for active vegetation management, on rare animal species. This analysis contributed to the revision or creation of several plan components.

The range of alternatives presented in the EIS provides for a range of management area allocations, including Recommended Wilderness and Backcountry, both of which have and emphasis on large tracts of unroaded forest.

Comment: The Forest Plan fails to include specific standards to safeguard threatened and endangered species from the impacts of regeneration harvests and fails to identify measures that will be taken to contribute to species recovery.

Response: The plan sets boundaries, through objectives, standards, and guidelines, for key habitat elements critical to species, including threatened and endangered species. The BA and final EIS include plan components that directly and indirectly contribute to the persistence and recovery of each federally listed species relevant to the Forests.

The Endangered Species Act (ESA) prohibits the Forest Service from implementing activities that result in take of a federally listed species. The ESA requires an analysis of direct and indirect effects on species' habitat for every project known to support or providing suitable habitat for federally listed species.

Comment: The EIS fails to address the loss of food sources for Carolina Northern Flying Squirrel from the removal trees in suitable habitat. Additional impacts to food sources would also likely stem from herbicide application in these areas and again the DEIS does not discuss these effects.

Response: To the extent possible, the Forest Service is actively involved in restoration and recovery efforts for the Carolina Northern Flying Squirrel, including a prioritization of spruce-fir restoration. All activities, including those designed to enhance or restore habitat for CNFS, must be in compliance with the Endangered Species Act. The Endangered Species Act (ESA) prohibits the Forest Service from implementing activities that result in take of a federally listed species. The ESA requires an analysis of direct and indirect effects on species' habitat for every project known to support or providing suitable habitat for federally listed species.

Comment: The Plan should avoid active management near Carolina Northern Flying Squirrel (CNFS) habitat, as regeneration is incompatible with CNFS habitat needs.

The plan should include a fine filter Standard specifying that any vegetative management scheduled in northern hardwood forests near known CNFS habitat will be designed based on best available scientific information to maintain or restore optimal hardwood habitat for the species and will place high importance on preserving connectivity.

Response: The Endangered Species Act requires project-level consultation on federally listed species. Consistent with ESA, this process will ensure that the Carolina Northern Flying Squirrel is not negatively affected by forest management. The BA and final EIS include plan components that directly and indirectly contribute to the persistence and recovery of each federally listed species relevant to the Forests. Northern hardwood forests are included in this analysis.

Comment: We believe there are additional measures that can be included in the plan to further provide protections for Indiana bat and other tree roosting bats (e.g., minimum of four snags per acre, choose largest roost trees/snags available with a minimum of 15-inches dbh, leave patches of roost trees where feasible, and provide adequate buffers of living trees around roost trees to protect from wind throw).

We recommend that the USFS and USFWS coordinate to ensure that adequate protections for tree roosting bats are included in the DEIS.

The Plan section for Ecosystem Restoration through Silviculture or Timber Management should include a standard similar to ECO-S-30 that includes specific language for timber management practices for the maintenance of an adequate number and habitat quality of bat roost trees (E.g., minimum of four snags per acre, choose largest roost trees/snags available with a minimum of 15-inches dbh).

Response: The forest plan incorporates all terms and conditions from the relevant Biological Opinions for all federally listed species, including the Indiana Bat (reference PAD-G-01).

The Final Plan was reorganized to separate out wildlife plan components and the standard for wildlife habitat diversity elements is WLF-S-01. This standard would apply for all vegetation management activities including timber management and therefore does not need to be repeated in the Timber Management Practices section of the Plan. Additionally, the Final Plan includes a standard in the Plant and Animal Diversity section to Coordinate with the USFWS to ensure that protection of potential and known hibernacula and maternity habitat is consistent with the most recent conservation measures, recovery plans, biological opinions or USFS bat conservation strategy (PAD-S-08).

Comment: We question the validity of the Composite Score for Snag and Den Tree Associates (Figure 75, DEIS). If adequate measures are in place to ensure that suitable habitat for tree roosting bats is protected, why does the Composite Score indicate a decrease for every alternative when compared to existing conditions? We recommend further explanation/information on this graph.

Response: This analysis has been updated in the final EIS. Snag recruitment and retention decrease immediately following vegetation management and prescribed fire, and then increase over time following these activities. The Snag and Den Tree Associates species groups describes composite scores ten- and fifty-years following implementation, and it is important to remember that activities occur each year of those periods (i.e. effects are not front-loaded).

Comment: Several species of tree roosting bats are also sensitive to the effects of fire, primarily to smoke intensity during burning, and timing of burns, rather than fire itself. We recommend removing bats from the 'fire-intolerant' section and analysis. Although bats can be negatively affected by fire, they are not inherently intolerant of fire. Bats have evolved with fire and the overall benefits of fire outweigh the negative effects of fire because it increases forage area, decreases understory density, creates roosting structures, and restores yellow pine ecosystems which we now believe is an important habitat aspect for Indiana bat in the Southern Appalachians.

Response: The EIS analysis considers short term impacts of smoke on the maternity and pup season and the long-term benefits of fire on the overall habitat quality and quantity for tree roosting bats. Multiple plan components within the revised plan contribute to avoiding or mitigating effects of smoke and prescribed fire on tree roosting bats (PAD-O-09) or contribute to improved habitat quality and quantity (see Terrestrial Wildlife Habitat and Plant and Animal Diversity sections of the plan).

Comment: The Forest Service has provided no data or other information suggesting that an increased amount of annual timber harvesting is needed to improve foraging habitat for bats. Given that the

recovery plans for the NLEB and Indiana Bat underscore the importance of preserving mature forests, it is puzzling why the Forest Service describes one of the objectives of creating young forests and open forest conditions is to provide roosting habitat for bats.

Response: Edge and transitional habitats are critical foraging areas for many species of bats. Indiana Bats in particular, are associated with edge habitats for foraging, although they may avoid interior portions of larger gaps. Northern long-eared bats are clutter-associated foragers, meaning they are more associated with open interior forests for foraging. Both of these species utilize adjacent forested habitats for maternity roosting, which need to provide snags or other trees with exfoliating bark. All of these conditions, in proximity to each other, are needed to ensure persistence of rare bats on the Forests.

Comment: The EIS does not accurately consider the effects of habitat loss (specifically timber harvest) on Indiana bat, Northern long-eared bat, and Rafinesque's Big-eared Bat. The fine-filter analysis needs to account for these impacts and the Forest Service must ensure that its actions will provide the ecological conditions necessary to contribute to the recovery of these federally listed threatened and endangered species.

Response: The effects of vegetation management on bats was analyzed in the EIS and the Biological Assessment which considered the programmatic framework of the Forest Plan on threatened and endangered species. As required by NEPA, additional analysis will occur as site-specific vegetation management projects are proposed.

Comment: The Forest Plan does not include necessary direction for the Forest Service to contribute to species recovery of Noonday Globe as required under the 2012 Planning Rule and Section 7 of the ESA. The loss of forest canopy has likely contributed to the historic decline of the species and there could be significant, long-term consequences to logging within noonday globe habitat.

The plan should include a standard that would require any vegetation management near noonday globe habitat to maintain or restore species habitat. The plan should specify that prescribed burning will not occur within the Noonday Globe's limited habitat range.

The Draft Plan also needs to commit to a rigorous monitoring program for noonday globe, as prescribed by the species' Recovery Plan.

Response: The 2012 Planning Rule and ESA require that any activities proposed and implemented by the Forest Service are consistent with maintaining species persistence and/or recovery. Project-level consultation with the USFWS would ensure that no proposed activities would negatively affect the noonday globe.

The area occupied by this species is not within management areas suitable for timber production.

The Forest Service, in partnership with the USFWS, developed a monitoring strategy for this species following the 2016 wildfires and will continue to work with the USFWS on the inventory, monitoring, and recovery of this species.

Comment: There is no discussion of the impacts of increased logging and road construction on Appalachian elktoe, mussels, etc., and no indication that these issues were considered by the Forest Service when the agency prepared Appendix C.

The agency needs to consider how increased sedimentation and siltation may impact these species.

Response: Roads and trail density near aquatic resources is included in the indicators evaluated in the Ecological Sustainability Evaluation Tool. Additionally, rare aquatic species are included in the updated analysis presented in the FEIS.

The existing and the revised Forest Plan emphasize minimizing sediment input to aquatic resources. Monitoring has shown that the existing plan framework is over 95% effective. There is no reason to think that the proposed plan will be any less effective. The final forest plan increases the streamside zones on perennial and intermittent stream channels, in part to reduce the threat of aquatic resource sedimentation.

Comment: The Forest Service inaccurately justifies the creation of early successional habitat as a means of providing habitat for the federally listed rusty patch bumblebee and other pollinators. The long-term contributor to rusty-patched bumblebee declines is the loss of native grasslands and regeneration harvests do not result in the appropriate habitat for the species and the Forest Service cannot confidently state that regeneration harvests would benefit the species.

The use of neonicotinoids has been strongly implicated as the cause of the decline of bees in general and specifically for the rusty patched bumblebee, due to the introduction of neonicotinoid use and the precipitous decline of the species. Herbicides should not be applied in suitable habitat for rusty patched bumblebee between early March to the beginning of hibernation in order to reduce the risk that necessary foraging resources will be damaged.

Response: In the absence of native grasslands on the Forests, habitat for the rusty-patched bumblebee is provided by forest edges and permanent openings at mid- to high elevations. The Forest Service is actively working with the USFWS to prioritize inventory and monitoring for this species across the landscape, including the Forests.

Herbicide and pesticide use on the Forests is strictly controlled by Forest, Regional, and National direction. This includes a reduced reliance on neonicotinoids whenever possible. It is agreed that the widespread use of neonicotinoids is a threat to many pollinators and that their use should be carefully considered. However, providing high quality edge and early seral habitats will undoubtedly benefit these species on the forest. Additionally, the ESA requires project-specific analysis of potential effects of any proposed activity, including herbicide use, on federally listed species.

Comment: We recommend the Forest Service adopt a plan Standard requiring pre-project monitoring or survey efforts in suitable rusty-patched bumblebee habitat within the historical range before management activities take place.

Response: The Forest Plan includes a standard project-level surveys are required for federally listed species when existing information is inadequate to make an informed decision (PAD-S-03).

Comment: The Draft Plan Fails to Conserve Plant and Animal Diversity Through a Coarse- Filter/Fine-Filter Approach. The coarse filter falls short of meeting the needs of many listed species and species of conservation concern because it does not recognize the complex and nuanced relationships many species have within the forest and across the larger landscape. The coarse filter does not consider the connections between unique habitat elements and rare species, nor does it consider the unique threats posed by management disturbances to species such as the Carolina northern flying squirrel or dispersal limited species such as salamanders.

Response: The Forest Plan clarifies the relationship between forest habitats and the species that depend on them. The plan's forestwide chapter provides plan components for each aquatic habitat and terrestrial ecozone, a separate section titled wildlife habitat across terrestrial ecozones, and a section on plant and animal diversity identifying additional plan direction needed for rare species and unique habitats. The Forest Plan includes fine filter plan components for flying squirrels (including but not limited to WLF-DC-06, WLF-S-01), green salamanders (including but not limited to PAD-S-14), bald and golden eagles, spruce fir moss spider, rock gnome lichen, and other species.

The Forest Plan was built using the Ecological Sustainability Evaluation tool to ensure that both coarse filter and fine filter protections are provided for all species on the forest. The Ecological Sustainability Evaluation includes species (fine filter) associations with numerous ecosystems and species groups (coarse filter). When plan components associated with coarse filter elements fail to address individual species needs, species-specific components are included. Every species included in the Ecological Sustainability Evaluation is associated with at least one, and often several, coarse filter elements. A list of all of the species considered in the ESE along with their associated coarse filter elements is contained in EIS Appendix C.

The FEIS' Chapter 3 analyzes impacts to rare species from forest management. Determinations of effect for federally listed species are presented in the accompanying Biological Assessment.

Project-specific analysis during plan implementation ensures that dispersal-limited species, and/or those associated with unique habitat characteristics are not impacted. The revised forest plan ensures that project-level surveys will occur when there is not enough information to make an informed decision. In accordance with the Endangered Species Act, in areas occupied by federally listed species and/or identified as designated critical habitat, management will maintain characteristics required by these species and effects to federally listed species require consultation with the USFWS at the project level.

Comment: The coarse filter approach fails to meaningfully consider the unique habitat requirements of closed canopy species such as northern pine snake and numerous plant species that are associated with closed canopy forest conditions.

Response: The Ecological Sustainability Evaluation (ESE) tool includes evaluation of a Closed Canopy Associates species group. Northern pine snake is included in this species group. The revised forest plan includes a standard to ensure that project-level surveys will occur when there is not enough information to make an informed decision about effects to a species.

Comment: The Draft Plan falls short of ensuring viability of vulnerable wildlife and contributing to species recovery because it contains many desired conditions that conflict with species recovery while simultaneously failing to include standards and guidelines that are adequate to address the recovery needs of these species.

Response: Existing law, regulation, and policy require the Forest Service to contribute to the recovery of federally listed species. Species-specific plan components are included when coarse filter requirements fail to address species' needs.

Comment: The plan should provide additional direction for the protection for green salamanders and their associated habitat including ensuring that roads do not contribute to migration stress.

Response: In addition to coarse filter plan components for salamander habitat, the Forest Plan includes a fine filter plan component to survey for green salamanders during project planning and avoidance of disturbance in the species' habitat.

Comment: We recommend additional specificity be added to the standard for green salamander (PAD-S-13) to ensure that surveys are conducted during project design but also, in the case where projects have a long timeline for implementation, within 2 years of the actual time of implementation. The standard should also be amended to include language that corridors between rock outcrops need to be maintained to allow for dispersion and interbreeding.

Response: The standard for green salamanders has been updated in the final plan (PAD-S-14) to include requirements for surveys during project planning and project design.

Maintenance of corridors between specific rock outcrops is a project-level determination, based on local habitat conditions and species occupancy. Typically, the location of potential and occupied rock outcrops is not identified until project-level surveys are undertaken.

Comment: The DEIS must analyze the impacts of habitat fragmentation to Green salamander and assess the risk that connectivity between appropriate habitat could be destroyed by vegetation management outside of a 300-foot buffer.

Response: The effect of habitat fragmentation on green salamanders is addressed in the analysis presented in the final EIS.

{CR 279} **Comment:** The Plan should incorporate practices from the Wildlife Management Institute's American Woodcock Management BMPs into project implementation. This includes prioritizing commercial and noncommercial treatments below 3,500 feet elevation in rich cove forest, acidic cove forest, shortleaf pine-oak heath forest, and alluvial forest and floodplain forest on loamy and sandy soils.

Response: The forest plan prioritizes restoration needs across the landscape. Some of these areas provide habitat for American woodcock.

Comment: The indiscriminate use of regeneration harvests in these forests would likely threaten mollusk species by removing necessary habitat features such as rotting logs and by drying out the forest floor.

Response: The forest plan contains plan components for retaining critical wildlife habitat elements, including coarse woody debris. Project-level analysis will consider impacts of proposed management on species that occur or have suitable habitat within the project area.

Comment: Permanent openings can help to meet wildlife habitat needs even before harvest levels have increased. To the extent it is within the capabilities of the USFS and partners, we recommend that the USFS consider increasing Objectives for maintenance and creation of wildlife openings.

We also request that the USFS complete an inventory of current openings as a critical first step and explain how permanent openings will contribute to overall habitat needs.

Response: Tier 2 objectives prescribe increases in permanent wildlife openings through restoration of existing openings and creation of new openings. The inventory of existing openings is complete and has been included in the Chapter 3 analysis in the EIS.

Comment: Request that wildlife fields be >5 acres, and 70% should be above 2,500' elevation.

Response: The final plan includes management approaches for wildlife habitat diversity that emphasize young forest habitat treatments at elevations above 2,500 feet and young forest habitat creation in NCWRC Wildlife Habitat Active Management Areas (WHAMAs) focal areas. Final Plan, Table 1. Estimated Amounts of Terrestrial Wildlife Habitat Over Many Planning Cycles, recognizes the need for larger openings for some wildlife species such as golden-winged warbler.

Comment: The FS should work with WRC to refine trapping rules that limit removal of beavers from areas that would benefit from beaver activity. We also request that the FS collaborate with stakeholders and WRC to identify potential sites for beaver restoration or relocation projects to benefit aquatic habitats.

Response: The Forest Service does not remove beavers from areas on the Forest nor is there a need to identify restoration opportunities for beavers on the forest.

Comment: We question the inclusion of some species in the Ecological Sustainability modeling that typically do not occur in the ecozones being analyzed. There is a potential for the modeling output to be skewed as a result of their inclusion. We recommend that the species list be edited, or additional information be provided to explain why species outside of the ecozones are included in the analysis.

Response: The analysis in the FEIS has been updated to clarify when species are included in specific ecozones.

Comment: Specific language highlighting the need for intense conservation efforts for the Timber Rattlesnake should be included in this plan because the largest remaining populations of Timber Rattlesnakes are in the National Forests. Old Growth forest or watershed designation will not help Timber Rattlesnakes, but a properly managed Forest will.

Response: Timber Rattlesnake is included in the Ecological Sustainability Evaluation, summarized in Chapter 3 of the EIS and Appendix C. Standard PAD-S-08 addresses the protection of suitable habitat for timber rattlesnakes in Rocky Habitats

Comment: The Forest Plan desired conditions for woodlands and other open forest types should include fireflies in the list of species that benefit from an open undisturbed understory.

Response: The desired conditions list a diversity of species that benefit from woodland conditions and other open forest types, including pollinators, which includes fireflies.

Comment: The Forest Service should consider information provided in State Wildlife Action Plans.

Response: Species of Greatest Conservation Need, as identified in the North Carolina Wildlife Action Plan, are included in the Ecological Sustainability Evaluation. Additionally, part of the plan revision process assessed the consistency of the forest plan with other planning documents such as the NCWAP.

Comment: The DEIS confounds all early seral stage species as having the same so called early successional habitat needs. For example, golden-winged warbler should not be equated with wild turkey and white-tailed deer for their reliance on early seral stages.

Response: Species-specific relationships to early successional habitats (e.g. preferred opening size, elevation, etc.) are identified in the FEIS and in Table 3 in the forest plan.

Comment: The Forest Service should work with experts to survey insect and bird populations.

Response: The Forest Service regularly monitors bird populations and coordinates with other agencies and organizations to effectively research and monitor both insects and birds.

Comment: The Plan should include an objective to coordinate with the NC Wildlife Resources Commission during project planning.

Response: Coordination with NCWRC staff is a routine part of project planning and implementation. All aspects of the revised forest plan reference cooperation and partnership with the NCWRC and other agencies and organizations.

Comment: Lower populations of white-tailed deer and ruffed grouse are a result of lack of ideal habitat. Monitoring data should be more specific to identify what habitats are most productive so those highly productive habitats can be duplicated in other sections of the Forest. We request that effective monitoring be implemented including "trend data", not just "the presence" of certain species.

Response: The role of national forests is to provide for and monitor habitats. Estimates of coarse- and fine-scaled habitats are provided in the FEIS, Appendix C. These habitats are correlated with animal population data from the NCWRC or other agencies.

Comment: We recommend that the USFS work with NCWRC to set achievable goals for brook trout monitoring.

Response: An estimate of the current range of brook trout and freshwater mussels has been coordinated with NCWRC. A workflow in the monitoring guide will be developed to document the coordination effort.

Comment: The Forest Plan should include more specificity about where and why active management will be prioritized as it relates to wildlife habitat needs.

Response: Active management will be prioritized in the Matrix management area and where there is an identified departure from desired conditions. The Forest Plan is programmatic and does not identify specific project areas.

Comment: We recommend expanding the monitoring questions focused on habitat and occupancy to include a broader range of terrestrial wildlife species, including Protected, Endangered, and Threatened (PET) species, Species of Conservation Concern (SCC), SGCN, and game species.

Response: Questions for monitoring habitat are prioritized in order to obtain information with limited resources and time. The Forest Service will coordinate with US Fish and Wildlife and NCWRC to synchronize monitoring efforts efficiently.

Comment: It is the understanding of the USFWS that the USFS has committed to monitoring federally threatened and endangered species present on the Nantahala and Pisgah Forests every 5 years. We request that this commitment be reiterated in the LMP and added to Table 11 for species not currently listed as having monitoring as a contribution to recovery.

Response: The Forest Service will continue to contribute to monitoring federally listed species with the USFWS, NCWRC, and other agencies.

Comment: Do not allow the use of non-biodegradable or non-photo-degradable erosion control netting/landscape fabric in areas of potential contact with ground nesting birds, fish, snakes, or other reptiles and amphibians. These creatures are susceptible to entanglement, injury, and death from these products.

Response: The use of particular types of landscape and erosion control netting is a project-level decision. The most appropriate form of netting depends on site conditions. While nonbiodegradable/monofilament netting has a lower likelihood of entangling wildlife, even biodegradable netting can cause wildlife entanglement. The correct installation and maintenance of erosion control netting, including removing matting when vegetation is established, is the key to minimizing wildlife entanglement.

Comment: We recommend that decommissioned road corridors be added to roadsides for maintaining young forest, grass, shrub, soft mast, and pollinator habitat.

Response: Decommissioned road corridors provide young forest conditions in the short term but are typically not maintained in an early seral state unless they are converted to a system trail.

BOTANY

Azaleas and Rhododendrons

Comment: Commenters expressed concern that the forest plan, particularly the guideline to reduce ericaceous shrubs in the understory and prescribed fire objectives, would be a detriment to native azaleas and rhododendrons which are valuable to wildlife including nesting birds and pollinators and valued by plant enthusiasts for their aesthetic beauty.

Response: The Forest recognizes that there is a wide diversity of native rhododendron species that occur in western NC, many of which produce showy blooms that attract visitors to the area.

The most abundant species on the forest are rosebay (*R. maximum* at mid to low elevation and *R. catawbiense* at high elevation). Rhododendrons and other ericaceous shrubs are hardy species that dominate the understory in many areas of the forest. The Forest Plan identifies open structural conditions as desirable for fire-adapted plant communities and includes prescribed fire objectives to reduce understory and overstory density to allow room for a more diverse fire-adapted understory of herbaceous and woody plants within the natural range of variation. The goal is not to eradicate all ericaceous shrubs within burn units, but rather to reduce the understory density allowing for greater plant diversity. The amount of prescribed burning that is implemented on the forest depends on capacity, internal and from partners, as well as favorable burning conditions; however, no more than one third of the Forest would be under a recurrent burning cycle.

Rhododendrons and other ericaceous shrubs may also be removed within streamside zones when there is an identified need to open the understory and improve nutrient capacity to stream organisms. Typically, rosebays are cut, followed by an application of herbicide on the cut stem. Other deciduous shrubs, such as sweet-pepperbush, spice-bush, elderberry, smooth hydrangea, or sweet-shrub are often planted. In recent years, these activities have been implemented across less than 0.05% of mountain rosebay habitat within acidic cove forests.

Following timber harvest treatments, stands that have dense understory shrubs may include herbicide treatment of rhododendrons to allow for regeneration of desirable tree species. Individual stems would be sprayed if they are within six feet of young trees and treatment would only occur during the initial stages of stand development to allow saplings to reach a competitive height.

Rare azaleas, including cumberland azalea (*R. cumberlandense*) and pink-shell azalea (*R. vaseyi*) were included in the ESE tool analysis in the EIS and plan components in the revised plan are adequate to provide for persistence of these species on the Forests.

Comment: The widespread use of regeneration harvests in old growth, northern hardwood, cove, and mesic oak forests also threatens several rare plant species, many of which are endemic to North Carolina. These plants also include several species of imperiled and critically imperiled lichen.

Because the coarse filter only accounts for the ecozone and age class, it ignores other facts such as elevation preferences. Many imperiled plant species only occur at certain elevations and therefore the coarse filter approach does not account for the potentially disparate impacts to these species if regeneration harvests are used uniformly across an ecozone regardless of the elevation.

Response: Three hundred and thirty-eight species of conservation concern were analyzed in the Ecological Sustainability Evaluation and results are included in Chapter 3 of the EIS. The Forest Plan includes coarse and fine filter plan components to ensure the persistence of threatened and endangered species on the forests. Standard PAD-S-03 requires field surveys for rare species

if enough information is not known to inform effects analysis. Project level analysis may identify additional site-specific criteria if rare plants are located.

Comment: We recommend further prioritizing bald maintenance and restoration within the Plan and recommend expanding restoration to include historic and encroached balds outside of the Roan Mountain Management Area.

Response: The objective for bald maintenance and restoration has been updated in the final plan to include restoration of balds outside the Roan Mountain MA. There is an additional objective for bald restoration specific to the Roan Mountain MA.

Comment: For the bog restoration objection, recommend adding the treatment of non-native invasive species and restoration of hydrology where needed.

Response: The restoration of unique habitats including bogs includes a diversity of treatments to achieve desirable conditions and will often include the treatment of non-native invasive species. All treatments are not included in the bog restoration objective but will be applied as necessary.

Comment: We do not believe a desired condition with a set percentage of canopy and shrub is appropriate for all sites and that the percentage may be too high for certain species, such as bog turtle. We recommend the percentages of cover be removed in Table 12 for Desired Conditions for Canopy Cover (Other Primary Characteristics) and replaced with the following language, "A mosaic of shrub thickets and herb dominated areas with soft, saturated soils present." Additionally, we recommend that bog restoration planning and objectives should be conducted/established on a site-by-site basis in collaboration with partners including North Carolina Wildlife Resources Commission, USFWS, and the Bog Learning Network.

Response: The desired conditions for Southern Appalachian bogs has been updated in Table 6 of the final plan and references a lower desired canopy cover. Management approaches in the Plant and Animal Diversity section of the final plan include coordination with the NC Wildlife Resources Commission, the USFWS, and other partners.

Comment: Numerous comments called for specific plan-level standards and guidance for State Natural Heritage Areas that lie in Matrix or Interface management areas.

All NHNA sites should be fully protected and designated as "unsuitable" for MAs.

No management actions should occur in any Natural Heritage Area except to restore, enhance, preserve, or protect the ecological and heritage qualities for which the areas were recognized.

Coordination with NHP regarding boundaries or treatment needs must occur before stands within NHNAs are prescribed for management.

Natural areas and boundaries should be field verified to assess benefits and impacts of proposed management actions.

The U.S. Forest Service should consider designating the highest rated Natural Heritage natural areas (Exceptional - R1 or C1). These exceptional places are considered the highest priority for conservation

based on the documented resources present, and in many cases contain one of the few known occurrences of a globally imperiled species or natural community.

Response: The Forest Plan includes plan components in the Plant and Animal Diversity section to work with the NC Natural Heritage Program to maintain, enhance, and restore plant and animal diversity. Evaluation of NC Natural Heritage Areas during forest plan development led to the allocation of many NC Natural Areas to the Special Interest Areas (SIA) MA. Natural Areas rated as exceptional by the NC Natural Heritage Program were reevaluated between draft and final and several boundary adjustments were made based on further review and consideration of MA allocation. These boundary adjustments are reflected in Alternative E of the FEIS.

The Forest Plan includes desired conditions for 25 unique habitats that occur on the Nantahala and Pisgah NFs. Additionally, integrated Ecosystem and Wildlife Habitat Management Approaches recognize the need to design treatments that are sensitive to or enhance unique biological features, especially within Natural Heritage Natural Areas. The Recreation section of the forest plan includes direction for the protection of unique habitats, specifically in areas that are sensitive to trampling of rare plants and animals.

Effects of the forest plan framework on plant and animal diversity as well as unique communities is analyzed in the Terrestrial Ecosystems section in Chapter 3 of the EIS. Alternatives A through E provide a range of management area allocations that differ in the extent to which Natural Areas are included in management areas not suitable for timber production.

Comment: All NC Natural Areas that are not already designated as Special Interest Areas (SIAs) should be allowed to exist in the suitable timber base and the USFS should adopt an adaptive management approach at the project-level in accordance with more robust Standards and Guidelines.

Response: The Forest Plan includes desired conditions, guidelines and management approaches to coordinate with the NC Natural Heritage Program during project planning and development. No specific direction is applied to NHNAs that are not identified as Special Interest Areas; however, close coordination with the state will ensure that the unique ecological values of the area are considered when designing projects.

Comment: The USFS should engage in a collaborative process with stakeholders prior to the allocation of recognized State Natural Heritage Area.

Response: Special Interest Areas were identified during plan development using a consistent process to evaluate NC Natural Heritage Areas and allocate the most exceptional areas to the SIA management area. The Forest Plan includes direction to coordinate with the NC Natural Heritage Program when activities are proposed in NC Natural Heritage Areas.

Comment: There needs to be more clarity in regard to what vegetation manipulation if any that would be allowed or used in the Special Interest Areas.

Response: The Forest Plan includes a standard in the SIA MA that identifies for what purposes timber management is allowed in SIAs. Separate standards for natural ignition fires and

prescribed fire indicate that fire management is allowed only where it will not negatively impact the desired community composition of the area.

Comment: During the implementation of the new Plan, there should be an embrace of adaptive management that is responsive to future findings about the distribution and management needs of rare species and communities.

We recommend expanding the monitoring questions focused on habitat and occupancy to include a broader range of terrestrial wildlife species, including Protected, Endangered, and Threatened (PET) species, Species of Conservation Concern (SCC), SGCN, and game species.

Response: The Monitoring and Adaptive Management Chapter of the Forest Plan includes monitoring questions and indicators for rare species and unique habitats.

Questions for monitoring habitat are prioritized in order to obtain information with limited resources and time. The Forest Service will coordinate with US Fish and Wildlife Service and NC Wildlife Resources Commission to synchronize monitoring efforts efficiently.

Comment: The Forest Service largely fails to recognize the immense roles that mycorrhizal fungi play in the ecosystem. A more balanced understanding of fungi in forest health is needed in the new plan. The discussion of managing fungi should be just as specific as the management of trees, because they are both interdependent and crucial to maintaining healthy forests.

Response: The Forest Service recognizes that many fungi are beneficial and critical for healthy forests. Mycorrhizae are important but unfortunately little is known regarding their abundance and importance across large landscapes. The Soils section of the Forest Plan includes desired conditions for sustaining soil productivity including decaying organic matter and recycling of nutrients, both of which are aided by the diversity of fungi.

NON-NATIVE INVASIVE SPECIES

Comment: The plan should include guidelines that require the inventory and treatment of NNIPs along forest roads before timber harvest occurs. Monitoring for invasives and treatment to eliminate the most concerning species should be ongoing with a specific action plan developed for each timber operation.

Riparian Areas should be added to areas considered for NNIP control.

Response: The Forest Plan includes desired conditions, standards, and guidelines to minimize the spread of non-native invasive species and prioritize treatment in areas that have unique habitats or threatened and endangered species. A standard was added to the Forest Health section of the final plan (FHL-S-05) that requires survey and treatment of non-native invasive species before and after vegetation management and other ground disturbing activities.

Comment: The management plan does not specifically state how the FS intends on maintaining hemlocks in the face of hemlock woolly adelgid.

Response: The Forest Plan includes a guideline to use integrated pest management to adaptively prevent, control, or suppress insects, disease and non-native pest/plan outbreaks.

Specificity regarding the treatment of hemlock woolly adelgid is analyzed in a site-specific analysis and decision for treatment of hemlock woolly adelgid on the Nantahala and Pisgah NFs.

Comment: Some commenters expressed opposition to the use of chemicals that kill native plants or reduce plant diversity.

Response: All alternatives in the EIS include the use of integrated pest management, including chemicals, to meet the goals of Executive Orders 13112 and 13751. The Forest Health section of the Forest Plan includes standards and guidelines to ensure that site-specific evaluation is completed prior to application of chemicals and that all pesticides are used according to label directions. Physical barriers are required when chemical treatment is applied next to federally listed species.

Comment: The Forest Service should cease the use of glyphosate due to its harmful effects.

Response: Glyphosate is the leading herbicide used to control invasive species in the United States. The FS Human Health and Ecological Risk Assessment for Glyphosate, and the EPA Scientific Advisory Panel on Glyphosate are the best available science. USDA supports the science-based risk assessments conducted by EPA and the Forest Service will continue to comply with EPA label instructions and analyze impacts of pesticide application during project level planning.

Comment: The plan should require that the use of non-native plant material be open to public comment and analyzed at the project level.

DEIS, ECO-S-31 should be modified to specify that any non-native material and its uses should be explicitly listed in project-level plans.

Response: The standard has been updated in the Final Plan to state that non-native material is only to be used if it is not invasive (WLF-S-02). The public will continue to have opportunities to comment on site-specific projects through the NEPA process.

Comment: Requests to add a new forest health standard that specifies survey and control of non-native invasive plant species (NNIS) after timber management activities.

Response: A standard requiring surveys and treatment of non-native invasive plants prior to and after ground disturbing activities is included in the Forest Health section of the final plan (FHL-S-05).

TIMBER

Comment: The Forest Plan should provide management prescriptions that guide treatment in lands that are unsuitable for timber production (e.g. creation and maintenance of woodland habitat by thinning and prescribed fire).

Response: The final plan includes a standard that identifies situations in which vegetation management would be allowed on lands that are not suitable for timber production (TIM-S-02). Plan direction in individual Management Areas (Forest Plan, Chapter 4) identifies situations when vegetation treatments, including timber harvest, would be appropriate. The specific management prescription would be determined consistent with management area direction.

Comment: The Forest Plan should include a management approach about specific types of management.

Requests for clarification on the types of uneven-aged management being considered in the Plan, and direction on treatments that would create a distribution of age classes within a stand.

The plan should emphasize that uneven aged forest management has been proven as unsuitable for managing hardwoods in the Appalachian region. This should be based on the Best Available Scientific Information (BASI) and guided by historic timber management.

Response: The Final Plan includes management approaches that identify restoration treatment priorities (Integrated Ecosystem and Wildlife Habitat Management Approaches). The appropriateness of even- and uneven-aged management systems are identified in the Timber Management Practices section, plan components Applicable to Even-Aged Management Systems and Two-Aged Silvicultural Systems and Applicable to Uneven-Aged Management Systems.

Uneven-aged management systems, namely irregular shelterwood and group selection systems in combination with other treatments, have been used successfully to create or restore complex within-stand structures in hardwood stands (Raymond and Bedard 2017, Lussier and Meek 2014, Lhotka and others 2018, and McNab and Oprean 2021).

Comment: NCWRC does not support the use of clearcutting specifically to enhance water yield values (DEIS, ECO-S-19 iii) unless it is to achieve a specific aquatic ecological benefit. The use of clearcutting to enhance instream water yield would likely only be effective on a large scale and provide a temporary water yield increase. There are many potentially deleterious effects of large-scale clearcutting, such as sedimentation, temperature shifts, and in-stream instability due to flashy flows.

The Partnership recommends that "water yield values" be struck from part iii. · ECO-S-19, iii.

Response: This standard has been updated to remove the words 'water yield' from bullet iii. (Final Plan TIM-S-17).

Comment: DEIS ECO-S-16 should be modified with the following addition: "All management within spruce- fir ecozones should be driven by ecozone restoration goals."

ECO-S-16 should be edited to allow harvests up to 80 acres to accomplish stand-level goals to improve composition. For example, to remove a seed source or to make the restoration treatment economically viable. This exception should be limited to the list of priority treatments (condition-based objectives).

Response: Some edits were made to even-aged opening standards to include the pine oak heath community and exclude the spruce-fir community (Final Plan TIM-S-14). The limitations on even-aged opening size come directly from 36 CFR 219.11(d)(4). Harvest sizes are limited by forest type and geographic area. Subpart (i) provides for compositional restoration in response to earlier comments received. Restoration priorities are included in the Integrated Ecosystem and Wildlife Habitat Management Approaches section of the Forest Plan.

Comment: The Forest Service needs to more clearly define the steps taken in the timber suitability analysis. The agency's analysis of the need for and impacts of estimated timber harvests in individual ecozones is inconsistent and unclear and does not support the agency's ecozone suitability determinations. The DEIS delineates which ecozones are suitable, but these determinations are not reflected in the Draft Plan's components. Plan components are not clear that areas incompatible with timber production are "unsuitable." The DEIS does not discuss how the agency interpreted the legal and technical factors listed in the 2012 Planning Rule at 36 C.F.R. §219.11(a)(i),(ii),(iv),(v), and (vi) to identify lands not suited for timber production.

The public lacks clarity on how the agency determined where timber production would result in "irreversible damage," or which forest communities are economically incompatible with scheduled timber harvests. Stating that details of the analysis' methods and assumptions is in the planning record is insufficient, per the Forest Service directives.

The Forest Service's analysis of the impacts of its estimated timber harvests for various ecozones does not support the agency's suitability determinations. The analysis' inconsistency on how the agency will decide to allow intensive timber harvests, and in which forest types is impermissible under NFMA and the Forest Service directives.

There is inconsistency between the DEIS analysis of "unsuitable" ecozones and the Spectrum timber harvest outputs. The DEIS does not adequately explain why these ecozones are compatible with commercial timber harvest but are not economically compatible with timber production. The agency's suitability determination and analysis appear arbitrary and capricious and internally inconsistent in violation of NFMA and the Forest Service directives. The agency must use a coherent, consistent framework to justify harvesting low-productivity forests.

Some ecozones are identified as suitable for timber production, but the Plan estimates that zero or practically zero timber harvest will take place there.

Spectrum assumptions do not correspond to any plan components or suitability determinations. For instance, the Forest Service should explain why it does not intend to harvest within Northern Hardwoods, explain what that means for suitability, and include plan components that outline that intent.

Response: The detailed steps of the timber suitability analysis are included in FEIS Appendix B and the Timber section of the FEIS includes an explanation of the suitability analysis, including which lands were identified as not suitable for timber production.

The Forest Plan analysis follows the process outlined in NFMA and FSH 1909.12 Chapter 60 to identify lands that are suitable for timber production. NFMA does not require the removal of individual ecozones or community types from the suitability analysis. While the DEIS identified individual ecozones that were not suitable for timber production, the final suitability analysis did not remove ecozones from the lands suitable for timber production.

The FEIS provides an explanation of volume estimates and reduced volume outputs from ecozones of lower commercial value under the assumption that treatments in those ecozones would more likely be noncommercial.

Comment: The Forest Plan should include a standard that prohibits timber production on hydric soils. The standard should require that project-specific determinations of hydric soil locations occur before implementing timber production projects. The agency should clarify if ECO-G-02 applies to timber production, or timber harvest for any purpose.

Response: Hydric soils were removed from the timber production suitability analysis. Plan components in the soils section and the timber section address the avoidance of hydric soils (SLS-G-01, TIM-S-07). The Forest Plan identifies that timber production will not be the primary purpose for projects and activities (TIM-S-01); however, other management actions may occur across the range of soil conditions with the forest. TIM-S-01 calls for confirming lands suitable and not suitable for timber production within project areas during site-specific analysis.

TIM-G-02 (formerly ECO-G-02) specifies that timber production should not occur on hydric soils and hydric soils are best determined at the project level as they exist in smaller polygons that are not readily mapped at the Plan level.

Comment: The Draft Plan lacks a statement that lands at risk of landslide or other geologic hazards due to timber harvest activities are not suitable for timber production. The EIS needs to explain how it determined which lands are unsuitable due to the risk of "irreversible damage" and what lands were identified in this analysis.

Plan components should expressly prohibit timber production on lands identified in the North Carolina Geological Survey (NCGS) Landslide Database, the County Landslide Hazard maps, or any other professional assessment, as the location of a prior landslide or being at risk of a landslide. Plan components should require the Forest Service to consult with NCGS and use BASI at the project level to determine if unassessed lands are landslide-prone. If so, they should be deemed unsuitable for timber production.

Lands with soils at risk of base cation depletion or landslides are not appropriate for timber production under the 2012 Planning Rule. The Final Plan and EIS should clarify that such lands are unsuitable for timber production.

Response: Steep slopes and sensitive soils were identified as lands unsuitable for timber production in Step 1 of the Suitability Analysis. The Suitability Analysis is described in the Timber section of the FEIS (Chapter 3), and a more detailed description of the individual steps is located in FEIS Appendix B.

The Forest Plan includes a standard (TIM-S-01) to confirm lands suitable and not suitable for timber production within project areas during site-specific analysis. The Geology section of the Forest Plan includes a management approach to include the NC Geologic Survey Landslide Database and County Landslide Hazard Maps when screening for landslide hazards.

The EIS explains that timber harvesting in catchments with a low acid neutralizing capacity can be designed with acidification risks in mind, including adding lime to soils or streams, increasing the pH of aggregate material in the catchment, or increasing monitoring. The plan includes an objective to annually assess the need for such mitigations (WSD-O-02) and monitoring question to assess the status of acid neutralizing capacity (MQ-1-2-T1).

Comment: The plan may not allow timber harvest that would "irreversibly damage" "soil, slope, or other watershed conditions" or harvest that cannot be "carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources." 36 C.F.R. § 219.11(d). Plan components must prohibit this.

Some plan components must be clarified and revised to limit timber harvest under certain circumstances to adhere to limitations imposed under NFMA and the Planning Rule. Requests for additional plan components addressing allowable logging systems on steep slopes, and associated clarification on whether only aerial logging systems would be used on slopes over 40%, with corresponding limits. If other logging systems are allowed on steep slopes, the agency should revisit the assumptions in its operability analysis.

Response: Consistent with the 2012 Planning Rule, the Forest Plan includes forestwide standards to ensure that vegetation management, including timber harvest, does not irreversibly damage natural resources. The Forest Plan includes a standard (TIM-S-01) to confirm lands suitable and not suitable for timber production within project areas during site-specific analysis

Proposed plan standards address logging on steep slopes and have been designed based on decades of monitoring by the Forest. The Forest follows NC Forestry Practices as well as additional Forest Plan measures to ensure that soil erosion is minimized. During project analysis, steep slopes are evaluated by the assessment team along with needs to restore the logging access system of roads. All soil disturbance, including temporary haul and skid roads, during and after logging, is stabilized with approved Forestry BMPs to reduce the risk of erosion.

The operability analysis takes into account that some harvesting can occur on slopes greater than 40% (see Appendix B).

Comment: Concerns regarding the application of ECO-S-02, and how it will be applied to timber harvest on lands unsuitable for timber production. If the plan does not specify reasons for harvest of unsuitable lands, there is no authority for the Forest Service to later create additional loopholes at the project level. The Standard's "not limited to" statement should be reconsidered. Even if a harvest is assigned one of the eight reasons in ECO-S-02's list, it does not mean it is automatically appropriate for unsuitable lands. The Forest Service should clarify that restoration of a terrestrial ecological system means improving the ecological trajectory of the particular site, consistent with ecozone desired conditions, such as restoring species composition. The list should also explain that harvest without a commercial purpose is permitted on unsuitable lands (see 16 U.S.C. § 1604(k)).

Response: TIM-S-02 (formerly ECO-S-02) was written consistent with 16 USC 1604 (k). This standard was updated in the Final Plan to bring it in line with the 2012 planning rule which requires timber harvest on lands not suited for timber production be done to protect multiple use values other than timber production or for salvage.

ECO-DC-06 articulates that ecological restoration is focused on restoring the key characteristics of ecozone composition and structure, function, and processes needed to maintain those key characteristics over time.

Comment: The DEIS asserts that timber harvests can occur even in areas that are not suitable for timber production if needed for restoration, but since the standards provide that timber production can only occur where needed for restoration, this leads to confusion about the areas where USFS anticipates commercial timber production will occur and obscures the analysis of impacts.

Response: This comment confuses timber production with timber harvest. Forest Service policy allows for timber harvest in areas that are not suitable for timber production. Timber standard 02 clarifies the circumstances when timber harvest can occur on lands that are not suitable for timber production. The Forest Plan Timber Management Practices section provides sideboards for how and where this harvest can occur and the FEIS includes an analysis of where timber operations are most likely to occur.

Comment: Timber production is incompatible with maintaining or enhancing the unique ecological characteristics of NHNAs. The Plan should contain plan components that specifically state that Natural Heritage Natural Areas (NHNAs) are not suitable for timber production and NHNAs must be excluded from timber calculations.

The agency should include all "exceptional" NHNAs within Special Interest Areas (SIAs). All NHNAs classified as "very high" and "high" that are found in Matrix or Interface should be moved to Ecological Interest Areas (EIAs).

There should be a requirement that the input of the North Carolina Natural Heritage Program is noted in the project record. Boundary adjustments to NHNAs that are mapped within Management Areas unsuitable for timber production may require changes to the plan.

Response: The relationship between NHNAs and suitability for timber production varies across the forest based on the Management Area (MA) in which they are embedded. In Management Areas other than Matrix and Interface, NHNAs would be considered not suitable for timber production per that MA's direction. During plan revision, the NHNAs designated as exceptional by the NC Natural Heritage Program were reviewed and allocated to Special Interest Areas (SIA) where appropriate. SIAs are not suitable for timber production. Where NHNAs fall within the Matrix and Interface MAs, those NHNAs would be subject to forest-wide and MA direction. The Plant and Animal Diversity section includes a guideline and a management approach to coordinate with the North Carolina Natural Heritage Program during project planning regarding management options for NHNAs. This collaboration with the State Agency will ensure that projects are both responsive to multiple use management as well as the unique biological values that are present in NHNAs.

State established Natural Area boundaries will be considered during site specific project level planning through cooperation with the NC Natural Heritage Program.

Comment: The Forest Service should focus on harvesting the youngest commercially viable age classes to allow recruitment of older forests and should focus on harvesting using the existing road system.

Response: The areas identified for harvest consider a variety of factors at the project level including the ecosystems and habitat needs of the area. Age and road access are considered but not to the exclusion of other needs in the area. To allow for the recruitment of older forests, multiple rotations would be expected on lands that have been treated in the past. To address

this in the EIS, the Spectrum model included prompts to repeatedly return to previously harvested units in order to reduce the timber harvest footprint across the forest.

Comment: Timber cutting is one of the very few industrial processes that produces a human benefit as well as a critical wildlife benefit. I recommend that much more discretion be given to the Ranger Districts in determining suitable parcels for restoration and wildlife habitat creation. I also recommend that standards, guidelines and objectives be modified to raise the priority for restoration and wildlife habitat creation.

Response: The Forest Plan includes direction to manage for wildlife habitat in strategic locations that benefit species that are dependent on these habitats which are in short supply. The Matrix management area provides opportunities for active restoration by enhancing composition, structure, function, and connectivity on the landscape. Multiple other management areas also allow for restoration activities, including young forest creation, consistent with the desired conditions, standards, and guidelines of the management area.

The final plan has been updated to reflect a subsection of the Terrestrial Ecosystems that is focused on wildlife habitat, titled Wildlife Habitat Across Terrestrial Ecozones. It includes standards and guidelines needed for wildlife habitats. The objectives for ecosystems are found in the Integrated Ecosystem and Wildlife Habitat Objectives section. All action alternatives focus on habitats that are in short supply and the Tier 2 level objectives identify what is possible with the help of partners and additional resources. Integrated Ecosystem and Wildlife Habitat Management Approaches outline specific priorities for meeting wildlife habitat needs when accomplishing these objectives. Additionally, the Plant and Animal Diversity section has specific objectives, standards, and guidelines for managing for rare species and unique habitats.

Comment: There is an apparent contradiction between the desired condition for lands identified as suitable for timber production (ECO-DC-17) and the standard which states that timber production would not be the primary purpose for projects and activities and shall complement the ecological restoration desired conditions and objectives (ECO-S-01). This contradiction needs to be resolved in favor of the ECO-DC-17 desired condition. The desired condition cannot be reached if the standard is enforced as written.

Response: The desired condition (final plan TIM-DC-06) and standard (final plan TIM-S-01) are not contradictory and the intent is that while lands that are suitable for timber production would have a regularly scheduled timber harvest program, this is not for the primary purpose of producing timber but rather to meet restoration and habitat objectives for young forest.

Comment: Commenters recommend editing ECO-S-01 to include ecological "age class" restoration.

Response: Adding the term "age class" to this standard (Final Plan TIM-S-01) would limit flexibility in restoration opportunities where timber production could provide benefits to both age class and species compositional restoration. The standard remains unchanged in the final plan.

Comment: The Partnership recommends that the language in ECO-G-02 regarding hydric soils should change "should" to "shall" and thus make this a Standard, rather than a Guideline.

Response: The guideline remains unchanged in the Final Plan (TIM-G-02). When combined with TIM- S-07, hydric soils are adequately addressed in Forest Plan standards.

Comment: The DEIS and ECO-DC-14 of the Draft Plan acknowledges that timber outputs contribute to the social and economic well-being of communities in western North Carolina. However, the Draft Plan does NOT explicitly define a "desired condition" for a predictable and sustained yield of timber resources from the Forest to adequately contribute to the social and economic well-being of surrounding communities. The NCFA recommends that the Forest Service identify timber harvest as a desired condition and not merely as a "tool" to meet other desired conditions.

Response: The final plan includes desired conditions for wood products to contribute to the social and economic well-being of local communities (TIM-DC-02, TIM-DC-03, TIM-DC-04). The forest plan also includes a section on Community Connections which focuses on how the Forests contribute to local quality of life through timber harvest and other sustainable economic development.

Comment: Commenters were concerned that ECO-S-05 places unnecessary restrictions on timber harvesters and recommend that it be revised or deleted to allow timber harvesters to use the harvesting system appropriate for the stand considering the full array of site-specific resource concerns, objectives, standards and guides.

Where timber harvesting is appropriate to occur, the harvesting system should be allowed to be implemented in a cost-effective and financially viable manner that results in the greatest dollar return and the greatest restoration outcomes and habitat improvement.

Response: This standard was not changed, and the language is consistent with NFMA requirements for all timber harvest (1604(g)(3)(E)(iv) and Forest Service directives (FSH 64.15).

Comment: ECO-DC-17 should have the words "and future middle- aged mast producing forest habitat" after the words "young forest habitat".

Response: This DC was updated in the Final Plan (Final Plan, TIM-DC-06).

Comment: ECO-S-04 should reference protection of all perennial, intermittent, and ephemeral streams"....

Response: This standard (Final Plan TIM-S-04) remains unchanged in the final plan. The standard refers to streams a whole. Additional standards regarding management activities within perennial, intermittent, and ephemeral streams are included in the Streamside Zone section of the Forest Plan. See streamside zone response to comments section for more information.

Comment: ECO-S-07(k)-drop "consider" and change the standard to "obliterate legacy skid roads"....

Response: The decision to obliterate an old road is a site-specific consideration to be made during project level planning and analysis, therefore, the standard was not changed in the final Plan (TIM-S-07).

Comment: The Forest Service should limit timber extraction in river corridors and above water supply and recreation areas.

Response: The Forest Plan contains plan components in the Water and Streamside Zones and Timber Management Practices sections that afford protection to riparian corridors and water supply areas. The Integrated Ecosystem and Wildlife Habitat Management Approach Section clarifies that treatments around concentrated recreation sites will consider the recreation values and visitor safety of the areas.

Comment: The Forest Plan should include standards that require cable logging on sustained slopes over 40% to guard against erosion and landslides unless site-specific analysis determines that other logging methods meet soil and water protection standards.

Stacked skid roads should not be constructed on steep slopes and the recommended logging methods should be identified in the project's environmental analysis.

The Forest Service must require specialized logging equipment or aerial logging techniques on slopes greater than 40% to guard against erosion and landslides. Steep slope equipment should be at least as protective of soil as skyline-cable systems.

Response: Proposed plan standards address concerns about logging on steep slopes. Plan standards related to logging on steep slopes have been designed based on decades of monitoring by the Forest. The Forest follows NC Forestry Practices as well as additional Forest Plan measures to ensure that soil erosion is minimized. During project analysis steep slopes are evaluated by the assessment team along with needs to restore the logging access system of roads. All soil disturbance, including temporary haul and skid roads, during and after logging is stabilized with approved Forestry BMPs to reduce the risk of erosion.

Comment: The Draft Plan does not consider the timing of timber harvests and only provides an annual estimate of the acres that would be harvested.

The Draft Plan does not adequately explain why timber harvests are the most appropriate tool.

Response: Timber standard 23 (TIM-S-23) and Forest Plan Appendix B provide details regarding harvest timing and the culmination of mean annual increment. Additional language was added in the revised forest plan in the terrestrial ecosystem sections regarding priority treatments for restoration. The appropriateness of even-aged timber harvest and clearcutting is identified in the Timber Management Practices section, plan components Applicable to Even-Aged Management Systems and Two-Aged Silvicultural Systems.

Comment: To the extent the Forest Service plans to pursue post-disturbance (salvage) logging under the revised Forest Plan, the agency must acknowledge in the EIS that salvage logging does not contribute to ecological integrity.

Response: The Forest Service respectfully disagrees. Salvage harvests can contribute to ecological integrity by restoring conditions in the ecosystem that are compromised by insect and disease and natural disturbance events and allow opportunities to respond to undesirable conditions that have developed over time.

Comment: The Forest Plan should identify explicit tradeoffs between alternatives resulting in different forest salable products.

Response: This discussion is in the timber Forest Products Outputs section of the EIS, Chapter 3.

Comment: The Forest Service must revise the stocking standards (ECO-S-10 and ECO-S-11) to require monitoring for species composition. This is necessary to support decisions about needed follow-up treatments. Plan standards must provide reasonable assurance that harvests will occur only where the future stand will be consistent with ecozone desired conditions.

The failure to differentiate between different ecozones is problematic primarily because it causes the Forest Service to miss the most important issue—species composition. Adequate restocking isn't just about stem counts; it's about ensuring that regeneration is likely to achieve the desired outcome.

Response: Stocking standards are a requirement of NFMA and have been included in the final plan as standards under the Timber Management Practices section. Forest Plan direction ensures that projects will meet NFMA stocking requirements within five years after harvest and standards have been updated to reflect differences between stocking on suitable land versus unsuitable land (TIM-S-08, TIM-S-09).

Desired Conditions in the Terrestrial Ecosystems section emphasize the restoration of key characteristics including species composition for individual ecozones at stand maturity. Species composition will be monitored and intermediate silvicultural treatments will be used to ensure desired species remain competitive in the harvested stands over the long term (Monitoring Chapter, Monitoring Questions and Indicators Category 2). Chapter 3 of the FEIS discusses the distinction between five-year stocking requirements and the need for later intermediate treatments to ensure desired species composition in the stand.

Comment: The Forest Service must determine the presence and size of oak regeneration ahead of treatments and use Best Available Scientific Information to determine the appropriate residual basal area to promote this cohort. The Forest Service should also monitor the species composition and competitive position post-treatment at the 5-year mark and beyond to determine if the intent of the prescription was met (ECO-S-10, ECO-S-11).

Response: Language was added to plan guidelines (Final Plan, TIM-G-05 and TIM-G-06) to include reference to tracking advance growth dependent species prior to regeneration treatments and using national database tools and surveys to track stand composition to ensure desired species composition. The Monitoring Program includes a question for tracking trends in oak regeneration, MQ-2-5-T2.

Comment: The forests should consider third party chain of custody timber management certifications, such as the Forest Stewardship Council or Sustainable Forestry Initiative. Pursuing certification could incentivize the forest product industry to purchase timber harvested from Forest Service lands, increase the financial viability of timber sales, improve the local economy, and provide the agency with more flexibility in pursuing priority treatments. Examine all plan components to ensure they meet or exceed third party certification requirements, and do not prevent the Nantahala and Pisgah NFs from pursuing third party certification.

Response: Per nationwide direction, the Forest Service currently does not have an avenue to third party certification. The Final Plan's Terrestrial Ecosystem section includes a management approach that calls for supporting third party certification standards, including the Forest Stewardship Council and Sustainable Forestry Initiative Certification.

FIRE

Comment: Numerous commenters offer support of increased prescribed fire in the Plan noting increased capacity through partners; the benefit to and prevalence of fire-adapted ecozones, their dependence on fire and impacts of fire suppression to plant and animal diversity; the reduced potential for catastrophic wildfires; and some reference the benefits to open woodland management work and that all such work in fire-adapted ecozones should include prescribed fire.

Commenters recommend and encourage the USFS to reassess the prescribed burning objectives and increase the amounts to a minimum of 15,000 acres per year to meet young forest and open forest objectives as proposed in the LMP. All efforts should be made to meet the Tier 2 levels (20,000 acres) as an annual goal.

Response: In all action alternatives prescribed burning levels increase compared to Alternative A. The agency recognizes the historic fire regime, and the broad-scale fire suppression that's occurred across the planning area since the early 1900's, and its associated ecological impacts. There is an increase of 3,500 to 25,000 acres between draft and final plan objectives for Tiers 1 and 2. There are management approaches identifying coordination with state and cooperative programs and use of collaborative tools to increase capacity for prescribed burning with an all-lands approach.

During the analysis of fire across the Forests, burn units were identified as very high, high, or moderately high priority for fire need. The total acreage of burn units that rate as very high, high and moderately high fire adapted classes were identified, along with which areas are fire adapted or interspersed non-fire adapted was identified. A Desired Condition in the fire and fuels section acknowledges that prescribed fire can generate various benefits, including vegetation management, restoration and maintenance of fire adapted ecosystems, and modify fuel loads to reduce fire intensity.

The Forests recognize that increased prescribed fire can reduce the potential for catastrophic wildfire. The Plan's fire and fuels section addresses that community protection and hazardous fuel reduction are elements of fire and fuels management, and the top priority for fire management is personnel and public safety.

The National Forests in NC are committed to restoring the forested ecosystems that are essential for providing all the benefits that people value from forests—clean air and water, carbon sequestration, habitat for native fish and wildlife, forest products, opportunities for outdoor recreation, as well as jobs and economic opportunity. Consequently, the restoring and maintaining of forested ecosystems is a central pillar guiding our future actions.

Comment: All woodland management work, regardless of treatment type, should include some level of prescribed fire in fire-adapted ecozones.

Response: Prescribed fire is not feasible in all units due to accessibility and other concerns such as smoke management, public health, weather conditions, capacity, and funding constraints. The appropriateness and feasibility for prescribed fire treatments will be addressed at the project level.

Comment: Commenters support prescribed fire to help wildlife.

Response: There are standards within the Wildlife section outlining wildlife considerations during vegetation management activities that includes prescribed fire. Additionally, management approaches to address wildlife habitat diversity are listed in the Integrated Ecosystem and Wildlife Habitat Management Approaches section, including references to fire objectives.

Comment: Commenters support loosened restrictions for conducting prescribed fires.

Response: Loosening prescribed fire restrictions is beyond the scope of the forest plan revision process.

Comment: Commenter supports increased prescribed burns to reduce impacts to the Forest's ability to sequester carbon.

Response: The National Forests in NC are committed to restoring the forested ecosystems that are essential for providing all the benefits that people value from forests—clean air and water, carbon sequestration, habitat for native fish and wildlife, forest products, opportunities for outdoor recreation, as well as jobs and economic opportunity. Consequently, restoring and maintaining forested ecosystems is a central pillar guiding future actions. In all action alternatives, prescribed burning levels increase compared to Alternative A. There is an increase of 3,500 to 25,000 acres between draft and final plan objectives for Tiers 1 and 2. As noted in the Climate and Carbon section, Environmental Consequences common to all alternatives, as the Forests age, rates of carbon uptake may decline after several decades, but carbon stocks will continue to increase. The Forests take up and store more carbon than they lose through disturbances and management activities combined. All proposed management activities would initially reduce carbon stocks on the Forests. However, these short-term losses and emissions are very small relative to both the total carbon stocks on the Forests and national and global emissions. The initial negative carbon effects would be mitigated or even reversed with time, reducing the potential for negative cumulative effects. The Forests will continue to be managed to maintain forests that provide ecosystem services and co-benefits, including carbon uptake and storage.

Comment: Commenters request wildfires be included in the acreage objectives, some noting this as an incentive to manage wildfires for natural resources benefits.

Response: Objectives are intended for management to provide sustained conditions over time. A sustained level of wildfire is not predictable for the future due to stochastic events. The final plan increases the emphasis on prescribed fire with up to 20,000 annual acres as an objective in Tier 1 and up to 45,000 annual acres in Tier 2.

Comment: Commenters oppose burning in the plan area noting the wet climate, some suggesting natural fire is rare in the plan area or certain ecozones, while others are concerned that fire encourages the spread of non-native invasive species, harms native species, or should be limited to only fire-dependent areas.

Response: Six of 11 ecozones on the Nantahala and Pisgah NFs have been identified as fire-adapted, requiring short-return interval fire for their maintenance. Some non-fire-adapted ecozones are high elevation. When a burn unit includes both fire-adapted and non-fire-adapted vegetation communities, the latter group is not-targeted with fire.

The EIS provides information regarding fire history in western NC and the need for prescribed fire in many of the forest ecosystems. Recent fire history studies indicate a high prevalence of fire for thousands of years, including the presence or dominance of fire-adapted species within the planning region. Fire potential fluctuates depending on factors such as days since rain, along with relative humidity and wind speed, rendering rain-free intervals able to support the spread of fire. The historical fire regime includes both lightning and human ignitions. While natural fires may be statistically uncommon today, we must consider how conditions have changed: the human population and causes for fire cannot be compared to situations before European settlement. In addition, the ecological conditions, such as forest structure and species composition, are so different now that lightning is less likely to cause a fire with impacts beyond the tree it hits. Lightning is not statistically rare, however the number of lightning-caused fires have decreased because of the changes in environmental and ecological conditions. In addition, the number of human-caused fires have increased with increased populations and human use of the forests.

Fire promotes fire-adapted and fire-tolerant species and suppresses fire-intolerant species. Fire may promote the growth and spread of disturbance dependent non-native invasive species, including xeric non-native invasive species such as Tree of Heaven, Miscanthus, and Princess tree. This occurs more in dry areas compared to wet or mesic areas. As the Forests propose larger burn units there may be some mesic habitats included, but it is difficult to keep fire burning in those wet areas. Generally, non-native invasive species are not stimulated by fire; however, the ground disturbance caused by burn preparation and containment lines may contribute to the spread of non-native invasive species in an area. The Forest Plan includes a guideline to use existing barriers (e.g., streams, wetlands, roads, and trails) where possible, to reduce the need for new fire line construction and to minimize resource impacts.

Mesic ecozones are not the target communities for prescribed fire. Objectives include using fire on a short return interval to maintain fire-adapted ecozones which are interspersed on the landscape with ecozones that are not fire-adapted. The Forest Plan does not include goals or

objectives associated with using landscape-level fire to alter the composition or structure of Northern Hardwood, Rich Cove, Acidic Cove, Floodplain forests, or Spruce Fir forests. There may be targeted, site preparation burns in these or other ecozones in order to achieve timber related goals; however, these ecozones are not considered fire-adapted, and fire return intervals exceed multiple planning cycles.

Comment: Commenters express concern over the impact of fire on azaleas, mycelia, vistas, and other attractions of the area, as well as the impact of added air pollutants on natural systems, and potential impacts to rare species.

Response: Prescribe burns are proposed within a portion of the habitats with either *Rhododendron*, both evergreen and deciduous (Azaleas), and *Kalmia* species. Typically, the burns on drier or submesic slopes would result in burning above ground portions of plants, resulting in re-sprouting from the root mass. The intent is not to eliminate these shrubs, rather to reduce them to less than 50% cover to allow for greater grass and herb diversity in the understory. Most prescribed burning is conducted during the dormant season when understory species are not blooming. The effects of individual burns on plant species will be analyzed during project-level analysis.

Frequent prescribed burning maintains soil fungal communities that may support plant communities that are composed of desired fire adapted or fire tolerant species that dominate the frequently burned areas (Oliver et. al 2015). The Forest Plan includes a Management Approach that calls for avoiding or safeguarding areas where prescribed fire will have harmful impacts to forest resources. Large landscape burns that include mesic acidic cove forests are typically not affected.

Controlled burning allows managers to limit the amount of pollutants within a given timeframe whereas wildfire by definition is uncontrolled and the atmospheric conditions which influence air quality cannot be predetermined. Applying controlled burns to the landscape will help prevent catastrophic wildfires that emit greater amounts of pollution to the atmosphere. Repeated burning of the same acreage is important, because it takes multiple burns to restore and maintain fire-adapted ecosystems that historically burned every five to seven years. Repeated burns would not be applied to non-fire adapted ecozones.

The effects of prescribed fire on rare species are analyzed in the EIS and incorporated into analysis of the Ecosystem Sustainability Tool (ESE Tool). The ESE Tool contains two fire-related species groups: fire-adapted species and fire-intolerant species. Appendix C of the FEIS identifies rare species associated with these coarse filter elements. Also, where fire is an integral part of ecozone health, the ESE Tool contains indicators referencing fire regime appropriately. This is also presented in Appendix C. Results of these analyses are discussed in the EIS. Additionally, potential effects of prescribed fire will be assessed further during project level analyses.

Comment: Commenters are concerned about the human and animal health impacts caused by fire.

Response: EPA recognizes that prescribed fire mitigates more severe hazards and threats resulting from uncontrolled wildfires which can occur under extreme and unpredictable weather conditions. Prescribed fires offer the opportunity to adjust the timing of fire and manage the

amount and direction of smoke, thereby potentially reducing the overall impacts of wildland fire emissions on public health and welfare. The Forest Plan includes a Desired Condition that smoke impacts on adjacent landowners and the public from prescribed fire activities on the Forests are minimal and short-term. Furthermore, the North Carolina Division of Air Quality does not identify prescribed fire emissions as a significant contributor to any National Ambient Air Quality Standards (NAAQS) exceedance. Plan standards direct adherence to the North Carolina Smoke Management Guidelines, and to utilize atmospheric dispersion modeling to predict air pollution concentrations when populated or sensitive areas could be impacted. Prescribed burns could be conducted if the atmospheric dispersion model predicts air pollution concentrations are low enough to protect the public's health and safety.

The effects of fire on wildlife species are analyzed in the EIS and incorporated into analysis of the Ecosystem Sustainability Tool (ESE Tool) (see also response above).

Comment: Commenters are concerned with fire management within streamside zones, including the impact of fire lines in those areas.

Response: The final forest plan addresses fire management in streamside zones, including following NC BMPs and Plan guidelines for identifying when fire lines in streamside zones are appropriate, with input from resource advisors, and to enhance diversity and restoration of those areas. Low intensity prescribed fire in streamside zones can enhance diversity through a mosaic of burned and unburned conditions.

Comment: Commenters request repairs to trails used as fire lines.

Response: A Forest Plan standard was added to address this concern as suggested, stating "If existing or planned NFS trails are used for access or fire lines associated with prescribed burns or wildfire suppression, affected trails shall be rehabilitated to meet agency standards for appropriate Trail Classes and use-types, including restoration of unique recreational values and use of sustainable trail design principles."

Comment: Commenter disagrees with reference to the relatively low risk of losing key ecosystem components due to high severity wildfire in Desired Condition-03.

Response: The agency recognizes that high severity wildfire may lead to the loss of ecosystem components but includes this plan component as a desired condition with an intent of managed risk. The agency plans to minimize the risk of losing key ecosystem components to high severity wildfire through management activities, including prescribed burning.

Comment: Federal lands provide habitat for our diverse regional wildlife and ecosystems to live and flourish. Any acreage designated as protected cannot be part of any control burns. WNC is in a fire-dependent environment and has adapted to a regime of low-intensity prescribed fires to remain healthy and thrive. This is a critical management tool that benefits the life cycle of our forests and wildlife and helps reduce the impact of wildfire hazards on adjoining properties to national forest lands.

Response: The Forests are committed to restoring forested ecosystems that are essential for providing all the benefits that people value from forests—clean air and water, carbon

sequestration, habitat for native fish and wildlife, forest products, opportunities for outdoor recreation, as well as jobs and economic opportunity. A Desired Condition in the fire and fuels section acknowledges that prescribed fire can generate various benefits, including vegetation management, restoration and maintenance of fire adapted ecosystems, and modify fuel loads to reduce fire intensity. In all action alternatives, prescribed burning levels increase compared to Alternative A. Alternative E increases the emphasis on prescribed fire with up to 20,000 annual acres as an objective in Tier 1 and up to 45,000 annual acres in Tier 2.

The Forest Plan includes standards for the Congressionally Designated Wilderness management area as well as the Recommended Wilderness management area to allow prescribed fire to reduce risks of wildfire or reduce fuel loading which may pose a risk to adjacent private lands.

Prescribed burns in other designated areas would be conducted with the stated values of those areas in mind and within any restrictions of the designating legislation.

Comment: Commenter is against burning in the Linville Gorge wilderness, noting the presence of *Hudsonia montana* and that an EIS should be required for future burn proposals in Linville Gorge Wilderness.

Response: The Forest Plan does not include site specific proposals such as burning in Linville Gorge Wilderness; however prescribed fire or wildland fire use may occur in Congressionally Designated Wilderness to reduce a buildup of fuels or to decrease the risks and consequences of wildland fire escaping from the area (CDW-S-23).

Hudsonia Montana is a federally listed species with a declining population due to the suppression of natural fires, as well as trampling by recreationists. Gross et al. indicates that a combined management approach of applying prescribed fire with a frequency as often as every 6-8 years, as well as reducing trampling should maximize *H. montana's* population growth. Any future proposals to burn *Hudsonia* either within or outside of wilderness would be analyzed through the NEPA process, including an opportunity for public involvement.

Comment: Commenter encourages the use of prescribed fire across boundaries to include Tribal lands, with consideration for culturally significant forest plants.

Response: The Forest Service is committed to increasing collaboration with Tribal governments to work across shared boundaries to apply prescribed fire to the greater landscape. Two new plan components have been added to the final Plan's Tribal Resources section to emphasize the agency's priority to take a shared stewardship approach when collaborating with Tribal government partners. Ultimately, the application of prescribed fire across boundaries will be determined at the project level.

Comment: Consider an active educational outreach program on the standards of Fire Safe Communities to volunteer fire departments, developers, municipalities, planning boards, and homeowners' associations.

Response: The Forest Plan includes management approaches in the Fire and Fuels section that address participation in and support of Community Protection Plans, Fire Adapted Communities, and fuel mitigation efforts throughout the 18-county plan area.

Comment: Given the importance of fire to high elevation red oak (HERO), the Forest Plan should include a prescribed burning objective for HERO to ensure plan level focus is given to maintaining and restoring HERO across the Forest. This may be achieved through the development of a separate objective or including HERO in the language proposed under ECO-O-06. Given that HERO occupies only a small portion of the entire Forest (40,000 acres, Table 2, LMP), we suggest treating at least 200-300 acres annually with fire.

Response: The Forest Plan includes a desired condition in the Fire and Fuels section that identifies high elevation red oak as a fire adapted ecosystem with a desired fire return interval of 5-10 years for restoration. The objectives in the Forest Plan do not specify amounts of prescribed fire by ecozone because it depends on the layout and design of site-specific burn blocks. As more landscape level burns are applied to meet the prescribed fire objectives, HERO would be incorporated in the site-specific prescribed fire plan.

Comment: Commenter challenges the ability of prescribed fire to create young forest conditions. The Forest Service should focus on removing the overstory through commercial timber harvest rather than applying high intensity fires to kill overstory trees.

Response: The FEIS analysis recognizes the difficulty of using prescribed fire to create young forest conditions. The amount of young forest estimated from prescribed fire is less than 5% and would generally be prescribed in Backcountry where access for commercial timber harvest is limited. The final plan includes an objective focused on Thin and Burn (ECO-O-05) that would include both commercial and non-commercial timber harvest activities.

Comment: ECO-DC-11 should include language noting “less severe fire effects: in ecozones with moderate moisture regimes.

Response: ECO-DC-11 was modified to include the "less severe fire effects" language into its final sentence.

LANDS

Comment: The Forest Service should prioritize land acquisition by rare or unique habitats as well as for improving connectivity of recreation trails to adjacent communities.

Response: The national guidelines for land acquisitions state that the resources that have the highest priority for acquisitions are: Riparian ecosystems on water frontage, such as lakes and major streams; Existing or potential habitats that support, in their current condition, federally listed endangered or threatened fish, wildlife, plant species, or Forest Service sensitive species; Historical or cultural resources, that are threatened by change or use or when management may be enhanced by public ownership; Areas needed to enhance or promote watershed improvements that affect the management of national forest riparian areas; Environmentally sensitive areas such as wetlands, old growth forests, and linkages needed for habitats with other public lands; Land primarily of value for outdoor recreation purposes and land needing protection for aesthetic purposes; Land needed for protection and management of administratively and Congressionally-designated areas; Land needed as a buffer for specific purposes listed above.

Comment: Several commenters would like to see the issue of public land access become a priority for the USFS while other commenters expressed concern regarding access to private lands that are surrounded by National Forest System lands.

Response: We value public access and regularly look to clear up access issues when they present themselves and as program of work priorities allow. The Forest Plan will not impact existing rights to access private land.

Comment: The Forest Service should contact landowners with private inholdings regarding the management of national forest system lands surrounding their property.

Response: Numerous public engagement opportunities were available over the last seven years of plan revision. Notification of these opportunities were made in the local newspapers, on our forest website, and through our email listserv. Many public meetings were well attended by local residents and landowners who provided input on the management of Forest Service lands. During site specific project planning, neighboring landowners are often contacted regarding proposed projects and are encouraged to provide comments on the project.

Comment: A commenter made a request for a special use permit for an Exotic Wildlife Rehabilitation area on National Forest System lands.

Response: The Forest Plan doesn't make any project specific decisions, including decisions about specific permit applications. However, this type of proposal would not be permitted because it does not pass the screening criteria for special uses permitted on National Forest System lands.

Comment: Special Use Permits may be dangerous to other users, an inappropriate use of forest trails and discriminate against the rights of other users.

Response: The special-uses program authorizes uses on NFS land that provide a benefit to the general public and protect public and natural resources values. The Forest Service carefully reviews each application to determine how the request affects the public's use of NFS land. Normally, NFS land is not made available if the overall needs of the individual or business can be met on nonfederal lands.

Comment: Commenters requested that NFS lands be free from fossil fuel extraction, pipelines, and commercial logging.

Response: As set forth in law, the mission of the Forest Service is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people. This includes a wide range of activities, including mineral extraction, logging, and energy conveyance systems. Each of these uses is analyzed in concurrence with current laws and standards.

Comment: The Forest Service should prohibit linear rights-of-way in Group 3 and 4 MAs (Backcountry, Special Interest Areas, Roan Mountain, Wilderness, recommended wilderness, Wilderness Study Areas, and Research Natural Areas) as well as Ecological Interest Areas.

Response: The issuance of new permits for utility corridors is not consistent with the desired conditions for research natural areas, wilderness, recommended wilderness and wilderness

study areas. The Roan Mountain Management Area includes a standard that utility corridors are not a suitable use with the management area.

SPECIAL USES

Comment: Commenters would like to see a guideline in the plan to require performance bonds that are paid at the time of the permit application when there is a possibility of damage to resources due to the permitted event.

Response: Thank you for your comment. Policy and guidance on bonding currently exist in the Forest Service Manual and Handbook. Additionally, all special use permits state that the holder shall be liable for any damage or other costs connected with rehabilitation or restoration as a direct result of their use.

Comment: The Forest Service should incentivize or encourage special use events in areas of the forest that are currently underutilized.

Response: Thank you for your comment. The Forest Service does not solicit or incentivize recreation events. Forest Service policy is to review and analyze specific proposals for a specific use and location.

Comment: The Forest Service or permit holders should be required to notify the public in advance of special use events in order to minimize user conflicts.

Response: The Nantahala and Pisgah NFs provide for a high number of special use permits annually and do not have the capacity to post and remove signs for individual events. Mitigation for recreation events on high use trails are addressed through the project specific NEPA process. The Forest is evaluating the use of the Forest website for future notifications of recreation events.

Comment: The Forest Service should develop and implement a monitoring protocol for determining negative impacts to trail systems and facilities as a result of special use events.

Response: Forest Service permits are handled on a case-by-case basis. All special use permits state that the holder shall be liable for any damage or other costs connected with rehabilitation or restoration as a direct result of their use. Currently, no monitoring plan to measure the cumulative effects of recreation events exists.

Comment: The Forest Service should develop and publish a simplified online guidance document that fully explains the application process for each guide permit category and any necessary guidelines to ensure applicants are having minimal impacts.

Response: We can work on improving the information on our website, regarding the application form and required documents, but this is outside of the scope of the Forest Plan.

The permit administrator takes an active role in the process, both to understand the proposed use and to filter out non-appropriate uses. Currently, the website instructs proponents to

contact the Forest Service directly for questions. Process times and types of uses will vary dramatically and will depend on program of work and the nature of the proposal.

Comment: The Forest Service should develop a system for determining the total number of each type of guide permit available for a given locale.

Response: Forest Service handbook (2709.14 53.1f) and manual guidance indicate when a capacity study is needed, and therefore this does not need to be included in the forest plan.

Comment: The Forest Service should commit to reducing processing time for new outfitters and for permits that would have minimal impacts or promote economic development.

Response: The Forest follows the manual and handbook direction on processing times for new proposals. The Nantahala and Pisgah NFs are the busiest forests in Region 8 for outfitting and guiding and we are implementing the national guidelines for modernizing special uses and improving efficiencies. All new proposals are reviewed, analyzed, and managed in conjunction with other active proposals and the yearly program of work. We strive to reduce process time and provide timely customer service.

Comment: The Forest Service should publish list of current permittees and associated geographic area to assist new proponents in identifying locations for outfitting and guiding.

Response: The proposal review process is outlined in the special uses handbook and manual direction (FSH 2709.11. Chapter 10). The Forest Service does not solicit new proposals. Proponents submit a proposal for a specific use and the Forest Service analyzes it accordingly. Permit processing times are not necessarily related to the geographic area. All new proposals need to be reviewed, analyzed, and managed in conjunction with other active proposals and the yearly program of work. We strive to reduce process time and provide timely customer service.

Comment: The Desired Condition that reads, "Special uses serve a local, regional, or national public benefit and need that cannot be accommodated on non-federal land"; should be reframed as a standard.

Response: The Forest Service follows manual and handbook direction when processing new permits, including screening criteria for all new permit applications which include review of consistency with forest plan direction. The plan component is appropriate as a desired condition.

Comment: The Forest Service should monitor whether approved special use permits are having minimum impacts and analyze and adjust or restrict the number of permits accordingly.

Response: The Forest Service Handbook and Manual already address when a Needs Assessments and Capacity Analysis is needed. This process addresses impacts to the land, as well as visitor trends with current and projected growth.

TRANSPORTATION AND ACCESS

Comment: Commenters requested to minimize or prohibit new road building on the forest.

Response: The Forest plan explains that most users of the Nantahala and Pisgah National Forests use motor vehicles to access the Forests, whether for recreational sightseeing, camping and hiking, hunting and fishing, commercial purposes such as timber harvest, administration of utilities and other lands, outfitting and guiding, or the many other uses of the National Forest Service lands. The NFS road system that provides this access is highly diverse, and different types of roads provide different levels of access while also protecting public health and safety and natural resources.

The Forest Plan does not identify an objective for road building because road construction is not an objective in and of itself. Road construction will likely be needed to accomplish other objectives of the plan, and the effects of road construction on other resources are analyzed in the EIS. The EIS estimates how road building could occur in the future and includes estimates for the next 200 years to ensure potential effects of resources are analyzed; however, it does not authorize this activity. Decisions regarding individual roads are made at the project level. Plan standard TA-S-03 is clear that construction of new travel resources shall only be planned, constructed, and designated following public involvement and site-specific environmental analysis; standard TA-S-07 explains that travel analysis is required when changes are considered to the transportation system. The EIS Transportation and Access section explains that historically, 20 percent of new system road construction occurs on new corridors, and 80 percent occurs as temporary roads or new system roads on existing corridors.

The plan includes direction to ensure that the transportation system reflects the expected levels of use and public desires while having minimal impacts on resources. Several plan components ensure that roads will be located to minimize impacts to resources (in the transportation and access, water, soils, geological resources and plant and animal diversity sections of the plan). The plan also includes monitoring of changes to the transportation system.

Road construction is not permitted in all management areas. New road construction will primarily occur in the Matrix and Interface MAs. Specific locations of new road construction will be informed through a Transportation Analysis Process and analyzed at the project level. Large, contiguous blocks of unroaded forest are provided for within Backcountry, Inventoried Roadless Areas, Recommended Wilderness, Wilderness Study Areas, and designated wilderness, which do not allow for new road construction. To respond to those who seek a larger or smaller road network, the alternatives vary in the percentage of land where road construction is permitted and the percent of the forest where road access is prioritized.

Comment: Commenters expressed a desire for an increased amount of road decommissioning, particularly where roads are causing resource damage.

Commenters also requested more details on the projected total miles of road decommissioning and that the Forest consider repurposing roads as trails particularly in backcountry areas.

Response: The plan includes a Tier 2 objective to decommission 10% of unneeded roads in Backcountry over the life of the plan. Road decommissioning will be informed by the Travel Analysis Process (TAP), which will be completed within three years of plan approval. The TAP identifies the needed road system and makes recommendations for decommissioning roads or adding new roads.

Road to trail conversion decisions would be made on a project-by-project basis and the transportation system would be evaluated for each project area at that time.

Comment: Commenters expressed concerns regarding the current level of deferred maintenance and questioned the Forest’s ability to maintain a sustainable road system and requested that the Forest have an inventory of the existing road network and maintenance needs. Comments also requested that road maintenance be prioritized on roads that are causing the most resource damage.

The Forest Service should build into the plan an adaptive management framework that allows new road construction based on incremental reductions of the maintenance backlog.

Existing roads and trails need to be maintained for fire and rescue purposes. Money from timber sales could be used for those purposes.

Response: The forest plan includes a desired condition to have a sustainable, well-maintained transportation system that provides safe and efficient public access and connectivity among communities and the Forests. The forest plan also includes an objective (TA-O-03), to develop and implement a forestwide road maintenance plan that identifies priority maintenance activities, funding sources, and performance responsibilities over the life of the plan. The Forest identifies annual and deferred maintenance and capital improvement priorities as critical and non-critical based on health and safety, natural resource protection, and Forest Service mission. Funding for road maintenance is subject to budgets and is not determined by the forest plan. An inventory of roads and their maintenance level is maintained in the Forest Service Infra database which manages information on national infrastructure. The plan monitoring framework includes a question on monitoring trends in road maintenance.

Comment: The Plan should include a monitoring indicator for the road maintenance backlog, and an alert that allows construction of new roads as the backlog is reduced.

We recommend providing information in the plan, about the percentage and total mileage of roads that currently meet and do not meet the National Forest standards, estimated mileage of unauthorized road and trail miles, percentage and total mileage of trails currently meeting the National Quality Standards, and percentage and total mileage of off-highway vehicle trails currently maintained to sufficient levels.

Response: The monitoring program includes a question (MQ-7-4-T1), related to trends in road maintenance, including miles maintained to standard. The monitoring program also includes a monitoring question about trails meeting national quality standards (MQ-5-3-T1), which is further discussed in the recreation section.

Comment: Commenters requested additional plan components be added to address the need to physically decommission temporary roads when they are no longer needed. Comments also indicated that the Forest Plan needs to contain more detail about the type of road decommissioning that the Forest intends to implement to mitigate environmental impacts.

Response: The plan includes a standard for temporary roads that requires decommissioning of the temporary road when it is no longer needed, using techniques such as but not limited to removing drainage structures, recontouring, and stabilizing the slope. The extent of physical

obliteration of a temporary road depends on the specific location and topography and complete recontouring may not always be necessary (TA-S-08). These road specific decisions are project level decisions and not decisions that are made in the plan.

Additionally, the plan contains guideline TA-G-01 that unauthorized, unclassified roads should be considered for obliteration to prevent erosion and sediment transport, to restore natural contours, drainage patterns, and vegetation.

Comment: Commenters requested that more roads be seasonally open during hunting season and that roads and trails should be maintained for fire and rescue purposes.

Response: The plan includes a desired condition for roads and trails to serve a variety of public and administrative needs. Additionally, the forest plan includes a Tier 2 objective to increase the mileage of seasonally open roads in Interface and Matrix by 5-10% over the life of the plan. Approximately 41% of Forest Service system roads are managed as either closed or restricted to protect the road prism from being degraded by vehicular traffic and to mitigate for illegal access to sensitive treatment areas. Travel management decisions, including the opening or closing of specific roads will be informed by the Travel Analysis Report, to be completed within three years of forest plan approval.

Comment: Forest roads are major barriers to aquatic organism passage, and they can also fragment habitat for species like salamanders. Thus, new or reconstructed road stream crossings must provide passage for all aquatic organisms.

Response: The plan includes standards TA-S-04 to ensure that stream crossing shall be designed to allow passage for native aquatic organisms. Between draft and final, this standard was modified to clarify that this standard includes amphibians, such as salamanders.

Comment: Commenters questioned the adequacy of the draft environmental impact statement analysis of roads including where they will be constructed and their impacts on natural resources, including effects on wildlife habitat connectivity, aquatic organism passage, contribution to the spread of nonnative invasive plant species, wildfires, and mass wasting events. Commenters also requested analysis of the risk associated with maintenance backlog on water quality, and the impacts that road building has on unroaded areas including inventoried roadless areas.

Response: The impacts of roads on water quality are discussed in the water section of the EIS. The impact of roads and access on invasive species spread is addressed in the forest health section of the EIS. The effect of roads on mass wasting is addressed in the geological resources section. Impacts to terrestrial wildlife and aquatic species were incorporated into the Ecological Sustainability Analysis for species groups (Appendix C). Total road density was used as an indicator measure for wildlife species sensitive to road density. The Forest Plan includes a standard to design road stream crossings to allow for native aquatic organism passage while minimizing impacts from erosion and sedimentation.

New road construction will primarily occur in the matrix and interface management areas. Specific locations of new road construction will be informed through a Transportation Analysis Process and analyzed at the project level. Large, contiguous blocks of unroaded forest are provided for within Backcountry, Inventoried Roadless Areas, Recommended Wilderness,

Wilderness Study Areas, and designated wilderness, which do not allow for new road construction.

Comment: The Forest Service should have identified a minimum road system prior to revision to inform resource management objectives and Management Area boundaries.

Create a new Objective for developing a Sustainability Inventory for the road network. Transportation analysis should create a risk assessment of roads that could be used for both ranking roads for maintenance and for the sustainability inventory.

Response: The Nantahala and Pisgah NFs had each begun the travel analysis process when forest plan revision began. The Forest Supervisor, in coordination with the Regional Forester, decided not to finalize the travel analysis report using the 1994 plan as amended and to instead use the revised plan, when completed. An objective was added to the forest plan to re-evaluate and update the Travel Analysis Report (TAR) within three years of plan approval (Plan Objective TA-O-02). The report will identify the minimum road system needed, which is the system needed to meet adopted resource management objectives, applicable statutory and regulatory requirements, long-term funding expectations, and to minimize adverse environmental impacts from road activities. The TAR process will identify and analyze issues, risks, benefits, and opportunities for possible future changes to the road system. Recommendations made in the TAR may be carried forward in NEPA projects. Future projects shall be informed by the TAR and, where practicable, may result in altering road management objectives, decommissioning unneeded roads, adding system roads to support management objectives, or transferring maintenance responsibilities to other entities.

Comment: Desired conditions should restate important road system management requirements of 36 CFR § 212.5. A forest-wide desired condition for roads is, "A minimum road system is provided to allow for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. The minimum system is the road system determined to be needed to meet resource and other management objectives identified in the plan."

Response: The plan includes objectives to complete the Travel Analysis Report, which will identify the minimum road system needed to meet adopted resource management objectives, applicable statutory and regulatory requirements, long-term funding expectations, and to minimize adverse environmental impacts from road activities. Additional plan language is not needed. See also comment above.

Comment: Comments stated that the DEIS failed to include information related to cost or funding sources of maintaining the existing road system or addressing deferred maintenance backlogs, the economic and environmental impacts of road maintenance, reconstruction, and improperly (long-term) stored roads. In addition, comments requested an alternative to reduce the national forest's road system to the point that there would be no annual deferred maintenance, which would minimize impacts to water quality.

Response: An alternative to reduce the road system to the point of no deferred maintenance is not a reasonable alternative to consider given that the forest transportation network provides critical infrastructure for the administration, public enjoyment, and protection of National Forest System lands. Based on current and projected future funding, the forest plan includes

objectives to maintain 280 miles of road to standard annually, with a Tier 2 objective to reduce maintenance backlog by an additional 10% annually.

Comment: Commenters raised questions or made recommendations on specific NFFS roads and requested that roads be decommissioned, gated, opened, or converted to recreation trails. A commenter recommended that an alternative be developed that reclaims 200 miles of system roads that are located in highly erosive soils. Another commenter recommended restoring roads that are located in established Semi-Primitive Non-Motorized ROS settings, which would include maintenance level 1 and 2 roads that are found in Backcountry and ANST Management Areas.

Response: It is beyond the scope of the 2020 Forest Plan to make decisions about specific roads or propose management on individual roads. It is part of the Travel Analysis Process to identify the needed road systems. That plan includes an objective to complete this Travel Analysis Process within three years of plan approval. Road to trail conversion decisions would be made on a project level basis and the transportation system would be evaluated for each project area at that time.

Comment: Commenters would like to see an objective that prioritizes maintaining and restoring various types and levels of access based on GA-specific criteria that aligns with GA Goals and Objectives. Specifically, there is a desire to increase access in areas where it is most important while also making progress towards downgrading, decommissioning or repurposing unneeded roads that are not currently receiving appropriate levels of maintenance.

Response: The Forest Plan, Transportation and Access section includes an objective to complete a Travel Analysis Process (TAP) within three years of plan approval. The TAP is a science-based process that relies on an integrated, interdisciplinary approach across multiple resource areas. Its role is to assist the Forest in identifying and maintaining an appropriately-sized and environmentally sustainable transportation system that is responsive to ecological, economic, and social concerns. Additionally, the plan includes management area direction for transportation and access, specific to the management area desired conditions.

Comment: The differences between alternatives would also affect local connectedness, although the Forest Service's transportation analysis ignores the data that would quantify those differences.

Response: The plan does not propose road building as part of plan components, although road building may be needed to achieve other plan objectives. For this reason, the EIS considers the potential impact of road construction on several resources. The anticipated new road construction numbers on new prism vary between 0.8 and 1.2 miles of road annually by alternative, which is described in the transportation and access section of the EIS. Resource impacts of road construction are described in Chapter 3 of the EIS for individual resources.

At the plan scale, connectedness is discussed in the climate change section of the EIS, where the forest connectedness is compared to the surrounding landscape, in the context of hardness of barriers, the connectedness of natural cover, and the arrangement of land uses that influence ecological processes and the movement of many types of organisms. Forestwide, 97.1 percent of the Nantahala and Pisgah NFs have average or greater local connectedness with 68.4 percent of the area categorized as above average (1 to 2 standard deviations above the regional average).

More localized analysis is outside the scope of the revision analysis. Should transportation system changes be proposed in a future project, then connectedness in the area could be considered in project level analysis.

Comment: All infrastructure must be designed and maintained to withstand increased storm intensity and frequency.

Response: The Forest Plan includes management approaches in the Climate Change section that address the need to anticipate increased disturbances, including intensifying storms. The Plan's Transportation and Access section includes multiple plan components that address the potential for intense storms and rainfall, including a standard for roads to be located and designed considering climate change-induced changes in precipitation. Preparation for more intense storms includes constructing appropriately sized culverts and stream crossings, relocating high risk roads and trails. Guidelines in the Plan's water section address minimizing the number of stream crossing in the design of roads and trails.

Comment: Recommended Plan Component: Roads shall not be constructed through rare communities or designated old growth patches unless there is no feasible alternative and are approved by the Forest Supervisor.

Response: The plan includes standards limiting road construction in the designated old growth network (OGN-S-03) and special interest areas (SIA-S-06).

Comment: For TA-O-04, the Partnership recommends this Objective be limited to roads, and the references to trails be removed to ensure that the Objective's goal is not met by solely or primarily obliterating trails.

For objective TA-O-04, Increase the Tier 1 level and provide a Tier 2 level to obliterate unauthorized roads and trails.

Response: This objective was modified between the draft and final plan to differentiate between miles for unauthorized roads versus trails. This objective reflects existing capacity (Tier 1), however if additional resources are available, the objective may be exceeded.

Comment: The Partnership recommends adding a new Objective that states: Decommission primitive roads from IRAs, subject to existing rights (e.g., maintaining Hendersonville reservoir infrastructure in N Mills), but where possible to maintain or enhance connectivity, consider converting to trails.

Response: Transportation and Access objectives TA-O-4 and TA-O-6 address decommissioning unauthorized roads in IRAs, and unneeded roads in Backcountry. Where possible, the FS can consider converting roads to trails, but decommissioning roads is a site-specific decision informed by the TAR process.

Comment: For TA-O-06, the Partnership recommends that the second half of Tier 2 should be a stand-alone Objective (without tiers). "Determine the amount of unneeded roads in Backcountry and remove them from the system road network. Decommission or repurpose 10% of the roads over the life of the plan."

While the Club understands the purpose and value of roads in the Interface and Matrix management areas, the Club does not understand or agree with the blanket notion of "no net decrease in the miles"

of roads in these areas, or of "increasing mileage of seasonally open roads" in these areas. Decisions to add mileage in these areas should be reviewed and evaluated from a range of perspectives, including from the hiking perspective.

Response: This plan objective intentionally paired increasing mileage of seasonally open roads in Interface and Matrix by 5-10% over the life of the plan, while also decommissioning unneeded roads in Backcountry. Both of these actions would require additional resources to accomplish, therefore retaining this as a Tier 2 objective is appropriate. Both of these actions would be informed by the TAR processes, and public input would ensure a range of perspectives prior to site specific decisions about specific roads.

Comment: Regarding the management approach for changes to the road system, the Partnership recommends adding number vii: "Avoid or minimize fragmentation or significantly changing the character of undeveloped areas."

Response: The suggested language is subjective and would be widely open to different interpretations. Plan language defines the overall desired conditions for transportation and access including reflecting the expected levels of use and public desires while having minimal impacts on resources. Additionally, the plan includes management area direction for transportation and access and desired conditions for individual management areas.

Comment: The Forest Plan should include a "road bank" in which new miles may be added to the system after demonstrating incremental progress toward meeting sustainability goals. E.g., a certain number of miles are available for each 10% reduction in the road maintenance backlog.

Response: A road bank is not useful because annually the forest plan calls for more roads be to decommissioned than for new roads to be built. Specifically, the action alternatives call for decommissioning 20 miles of unauthorized roads during the next 10 years (TA-O-04, Alternative E), as well as decreasing unneeded system roads in Backcountry (TA-O-06, Tier 2). Meanwhile, the alternatives do not have an objective for road construction. While roads may need to be built to accomplish other objectives in the plan, the EIS estimates that even at the highest levels of management activity total miles of new road corridor would be about 0.8 (Alternative E, Tier 2). Overall, based on this analysis, there is anticipated to be a net reduction in overall roads.

In terms of road maintenance, the plan places increased emphasis on this, including an objective to develop and implement a forestwide road maintenance plan that identifies priority maintenance activities (TA-O-03).

Comment: The NFS should not adopt any plan in which the construction of new roads, multi-use trails or 'motorized use trails' are favored over new hiking trails. I find that the restrictions on new trail mileage in all Management Alternatives, but particularly Alternative C, are overly constraining and do not allow for the flexibility that a 20-year plan requires. This is especially concerning when considering that the desired condition in TA-O-06 states plans to, "increase mileage of seasonally open roads in Interface and Matrix by 5-10% over the life of the plan." In my judgment, the stated preference for roads rather than the construction of new trails reflects a significant public policy error by the NFS in term of priorities.

Response: The forest plan does not include any objectives for road construction. The commenter misunderstood TA-O-06 to be about road construction, while the subject of that objective is opening existing gated roads for increased access, with a priority on recreational access. The

plan includes several plan components supporting a sustainable trail network for the future. For information on how the Forest Service responded to input on new trail construction, see the dispersed recreation section.

Comment: We recommend keeping TA- O-04 with this addition: "Prioritization should be given to the sources causing the most sedimentation."

Response: This objective states that roads will be identified and prioritized for obliteration to minimize erosion and sedimentation.

Comment: TA-DC-02- drop "and energy and mineral development."

Response: Energy and mineral development area part of the mission of the Forest Service as defined under the Multiple Use Sustained Yield Act. No change to the desired condition was made.

Comment: Road maintenance should include more than grading and gravel.

Response: The Forest Service agrees. The plan includes several plan components in the Transportation and Access sections regarding management practices for road maintenance. The water and soil sections also include more information on best management practices for water quality.

Comment: We recommend adding a DC such as "Roads and trails are not vectors for the spread and transmission of NNIS or forest pests and diseases." We recommend that the USFS work with partners to develop specific strategies to minimize the introduction and spread of NNIS associated with roads and trails.

Response: A desired condition has been added in the Transportation and Access section in response to this comment (TA-DC-13).

Comment: The Draft Plan falls far short of achieving a sustainable road system and the DEIS has an inadequate discussion of the impacts of roads and the uncertainties regarding future mitigation projects. This is particularly concerning considering the terrestrial condition assessment (TCA) for national forests assigned a "very poor" rating of the total road density metric for the Nantahala and Pisgah National Forests.

Response: The Nantahala and Pisgah NFs forest plan includes plan components intended to maintain a sustainable road system that has minimal impacts to resources. For example, the Transportation and Access section includes an objective to complete a Travel Analysis Process (TAP) within three years of plan approval. The TAP will assist the Forest in identifying and maintaining an appropriately-sized and environmentally sustainable transportation system that is responsive to ecological, economic, and social concerns.

The comment references a terrestrial condition assessment (TCA), which is a national evaluation of the effects of uncharacteristic stressors and disturbance agents on land-type associations to identify restoration opportunities on national forests at a national level. Road density is considered an environmental stressor in the TCA framework is just one of many metrics used to evaluate the ecological integrity on NFS lands. In the forest plan EIS, multiple sections analyze ecological integrity, including the terrestrial ecosystem section of the EIS, which also includes an analysis of road density sensitive species.

As described in the EIS and the responses above, road density is not anticipated to increase under the revised plan. Plan components support decommissioning unnecessary roads in Backcountry (TA-O-06) and unauthorized road miles in priority watersheds and inventoried roadless areas (TA-O-04), while the plan does not have objectives for road construction. Impacts from the forest road system on forest resources are covered in Chapter 3 of the EIS.

FACILITIES

Comment: Commenters requested that all forest infrastructure be designed and maintained to withstand increased storm intensity and frequency. They also expressed support for forest facilities being designed and constructed in an environmentally friendly manner to improve sustainability and carbon reduction efforts.

Response: The Plan's Facilities section addresses incorporating sustainability concepts into new facility construction and renovation projects. The desired condition for facilities is that sustainable concepts and construction methods are incorporated in new facility construction and facility renovation projects to the greatest practical level. The Forest Plan addresses the need to anticipate increased disturbances, including intensifying storms. A facilities standard states that all facilities shall be located to avoid impacts on aquatic habitat and prevent ground and surface water contamination (FAC-S-02).

Facilities guidelines address designing and maintaining facilities to minimize impacts to resources, including watersheds and aquatic species, and implementing Best Management Practices to reduce erosion and sedimentation, and locating sites and facilities based on floodplain risk. Additionally, materials for construction and renovation projects include forest products and other locally sourced products if available and economical.

RECREATION SETTINGS

Comment: The Forest Plan does not recognize the unique recreational attributes of several Special Interest Areas, including Linville Gorge, Looking Glass Rock, and Whiteside Mountain.

Including recreation in these areas' unique attributes is important and necessary to more accurately account for the unique characteristics which make these areas special.

Response: Special Interest Areas (SIAs) are defined in the Forest Plan as the most exceptional ecological communities that serve as core areas for conservation of the most significant and rare elements of biological diversity on the Forests. While all SIAs have high biological values, some are also recognized for other values including, geology, tribal attributes, recreation and/or scenery. While designation of an SIA does not preclude recreational use, that use should not result in degradation of the special ecological features. The Forest Plan includes a desired condition for the Special Interest Area MA to include interpretive information to develop understanding of the importance of protecting the plant and animal communities of the area.

Additionally, Linville Gorge, Looking Glass Rock, and Whiteside Mountain are all specifically mentioned in the Geographic Area chapter in recognition of their unique features.

DEVELOPED RECREATION

Comment: Commenters request additional shooting ranges.

Response: Development of new infrastructure is not likely, and unsustainable sites may be closed in the future. All decisions are based upon collaborative evaluation of the critical success factors of sustainable recreation: shared vision, financially sustainable, visitor satisfaction, natural and cultural resource protection, and ability to manage effectively. Some sites may be reconfigured or altered to retain or improve visitor experiences while being financially sustainable.

Comment: Commenters request equestrians receive priority for camping at designated horse camps. Some commenters requested the re-opening of Boones Fork equestrian campground

Response: Equestrian camping priority was discussed with District personnel and was concluded that non-equestrian campers don't negatively impact campsite availability for equestrians to the degree that would warrant the comment's recommended change. Additionally, campground utilization is paramount to financially sustainable operations.

Wolf Ford, Wash Creek, and Harmon Den horse camps are reservable on Recreation.gov. Boone Fork campground saw very little use and little revenue, therefore it was not sustainable to leave it open, though this is a project-level comment and beyond the scope of the Plan.

Comment: Commenters offer a range of suggestions to increase or add recreation fees, some for increased OHV fees, for trail use and others related to hunting.

Response: Fee proposals for new or increased recreation fees are handled separately from the plan revision process. Fee proposals undergo a public participation process where the public has the opportunity to provide input.

The two OHV trail systems on the Nantahala and Pisgah National Forest already have fees in place. Hunting licenses are administered by the NCWRC, not the Forest Service.

Comment: Commenters want to see hunting as a key component of the Plan's theme of Connecting People to the Land.

Commenters encourage facilitating healthy deer populations noting deer hunting as a local tradition and economic driver, as well as maintaining access to hunting areas particularly for mobility impaired in order to preserve traditional and inter-generational hunting opportunities.

Response: The Plan recognizes the cultural and economic value of hunting, and supports objectives to restore and enhance wildlife habitat, including habitat for game species, on the Forests. The theme of Connecting people to the land recognizes that the forests support traditional uses, including hunting.

Management Objectives within the Integrated Ecosystem and Wildlife Habitat section aim to improve forest health, to include maintenance or restoration of grass, forb and shrub openings; an increase in new young forest; promotion of open forest woodland and use of prescribed fire as one of the tools to accomplish these gains. There is a Recreation Settings Management Approach that directs the Forest to coordinate with NC Wildlife Resources Commission and other partners and volunteers to manage habitat associated with hunting, fishing, and wildlife viewing. Potential effects of the proposed alternative on White-tailed Deer habitat and populations are summarized in the EIS, Demand Species section.

The Dispersed Recreation section of the Plan include Desired Conditions for the Forests to provide high quality wildlife-based recreational opportunities, including hunting, fishing, and wildlife viewing. Another desired condition is a sustainable road and trail network that provides access to hunting, fishing, and other recreation activities that connect people with nature. The Black Mountains Geographic area has a goal to emphasize access for hunting and fishing during appropriate seasons through consideration of permitting access to open and seasonally open roads for deer and bear hunting. A standard within the Interface Management Area section and a desired condition of the Matrix Management Area section states that seasonally restricted or closed roads, respectively, may be open for short timeframes for specific purposes, such as hunting, berry picking, or seasonal foliage viewing, when impacts to natural resources can be prevented or mitigated. There are objectives in the Transportation and Access section that reference no net decrease in miles of open roads in Interface and Matrix to assure access to the forest and a Tier 2 objective of increasing existing seasonally opened roads rather than creating new roads, prioritizing recreation access.

There is also a Tier 1 objective in the same section of the Plan to develop and implement a forestwide road maintenance plan that identifies priority maintenance activities, funding sources, and performance responsibilities over the life of the plan. The work presented in this plan is prioritized to promote public safety, prevent erosion and sedimentation, protect water quality, and maintain access to the Forests with an emphasis on priority watersheds. Newly constructed or improved trails are compliant with Forest Service Trail Accessibility Guidelines (FSTAG) intended to ensure access opportunities to the aging population and those with mobility impairments.

Comment: Commenters request a variety of actions related to hunting, such as preventing poaching, restricting hunting on Sundays, an increase in tags and supporting fishing rights.

Commenters request an increase in hunting limits to maintain deer populations.

Response: North Carolina hunting regulations are proposed and enforced by the NC Wildlife Resources Commission, and signed into law by the NC legislature.

The NC Wildlife Resources Commission manages wildlife harvest limits, therefore increasing hunting limits is beyond the scope of the plan.

Comment: Commenters are concerned about the conflicts between hunters and other forest users.

Response: The safety of all visitors is incredibly important to the agency, and specific hunting restrictions would be handled on a specific basis outside of the plan revision process. Hunting is

also an important use of public lands for many people. User conflicts have unfortunately increased with the growing popularity of these public lands. CFR 261.10, Occupancy and Use, covers prohibitions for discharging of firearms. Forest Service law enforcement follows Federal and any other applicable state laws regarding hunting. Please see 36CFR 261.8.

Comment: Commenters note recreation development scales are referenced, but not included in the Plan.

Response: Development Scales are defined in the Forest Service Manual 2330, table 2330.3 Exhibit 01 and summarized in the Plan Glossary.

Comment: Commenters request a clearer definition of the tools allowed for rockhounding, asking if the same applies to the collection of other forest resources; request any closures to these tools be carried out by Geographic Area; resources available for identified designated rockhounding areas; and what the difference is between identified areas and general forest for rockhounding.

Response: Surface penetrating tools are tools that are used to penetrate the surface of the ground. Designated rock collecting areas and resources will be further defined through collaboration with user groups. Identification of these areas will take place within three years of plan approval. The identified areas are different from non-commercial mineral collection in the general forest in that surface-penetrating tools are allowed, whereas these tools are not allowed in the general forest.

While not restricted by ground disturbance, ginseng harvest occurs only under permits that are released through a lottery system, and ginseng population health is closely monitored.

Comment: Commenters request improvements to existing trailheads and additional trailheads and trailhead parking, suggesting fees to address costs.

Response: Trailhead improvements are handled on a site-specific project level and not through the Forest Plan. Funding sources vary widely between those available to the Forest Service and state agencies. There is a Desired Condition and Objective within the Recreation Settings section of the Plan that state accurate high-quality visitor information is available through multiple sources, including Forest Service and concessionaire employees, partners, volunteers, electronic media and onsite information boards, to enhance visitor safety, experiences, resource protection, and to reduce user conflict. The referenced Objective states: Improve visitor satisfaction by maintaining and operating priority developed recreation sites to a facility condition of at least 90% and to National Quality Standards within 10 years. Additionally, the Developed Recreation section includes the following Management Approach: Development of new infrastructure is not likely, and unsustainable sites may be closed in the future. All decisions are based upon collaborative evaluation of the critical success factors of sustainable recreation: shared vision, financially sustainable, visitor satisfaction, natural and cultural resource protection, and ability to manage effectively. Some sites may be reconfigured or altered to retain or improve visitor experiences while being financially sustainable.

Comment: Commenters request minimizing visual impacts of active management to the recreation experience and request expansion of and improvements to campsites, trails, special needs fishing access, and other recreation infrastructure.

Response: All proposed actions which may visually alter landscape character must undergo a project-level scenery impact analysis as outlined in the Forestwide Scenery section of the Plan and meet the desired Scenic Integrity Objectives identified for each management area. Proposed activities visible from locations with national or regional significance have a more restrictive SIO assigned. The Plan provides management direction on moving the trail system to a more sustainable condition, which may be achieved through trail maintenance, relocation or new trail construction in conjunction with decommissioning of unsustainable trails or trail segments through collaborative trail planning. Specific trails are managed at the Ranger District level. Trail condition assessments and decisions on maintenance needs, temporary closure, or decommissioning are made at the project level. There is an Objective in the Recreation Settings section of the Plan that states: Improve visitor satisfaction by maintaining and operating priority developed recreation sites to a facility condition of at least 90% and to National Quality Standards within 10 years. Additionally, the Developed Recreation section includes the following Management Approach that addresses unsustainable recreation sites.

Fishing regulatory signs are developed and posted by the North Carolina Wildlife Resources Commission.

Comment: Commenters request a permitting system for recreation in sensitive or high-use areas.

Response: A desired condition of all recreation settings across the forest is that they reflect healthy and resilient landscapes, provide a diverse sense of place for community residents and visitors and connect people to the land through high-quality and safe sustainable recreation opportunities and valuable outdoor experiences. Requiring permits for specific areas would be implemented through a specific process separate from the plan revision.

Comment: Commenters request increasing dispersed recreation opportunities for people with disabilities through ADA-accessible gates.

Response: Newly constructed or replaced gates on administratively closed roads that are managed as linear wildlife openings or provide access to other wildlife openings are accessible, where appropriate.

Comment: Commenters request more parking in high use areas.

Response: The Developed Recreation Management Approaches include strategies for addressing improvements at recreation facilities in a sustainable manner.

Expansion of specific parking areas would be handled on a project-level basis.

DISPERSED RECREATION

Comment: Commenters request sharing single track trails with OHVs and/or dirt bikes and allowing motorcycles on gated roads. OHV/dirt bike double track trails and economic benefits were also mentioned.

Response: Off-highway vehicle trails for ATV's, side-by-sides, and motorcycles are currently available at Wayehutta and Brown Mountain OHV Trail Systems. Proposed Plan direction identifies maintenance of these trails as a priority. A decision was made early in the Plan revision

process that no additional OHV trails would be added to the system, unless short connectors or relocation are needed to improve sustainability.

In response to the comments that note more motorized trail opportunities in western forests, the soils in the Southern Appalachian Mountains are highly erodible and impacts are exacerbated by extremely high rainfall in the region. Soils in many western forests are rocky and able to withstand the impacts of OHV use, and average rainfall in many western states is far less than in the Southern Appalachian Mountains, especially during the high use seasons from spring to fall.

Comment: Some commenters support continuing to allow or expand shared use on trails (horses, hikers, and mountain bikers) referencing demand and economic gains, while others noted some trail realignment to accommodate the addition of mountain bike use has degraded the hiking experience on the trail with particular reference to current and historic enjoyment of trail stream crossings.

Response: Many trails on the Nantahala and Pisgah NFs allow hiking, equestrian, and mountain biking uses. Although potential for user conflicts and suitability for particular allowed uses is part of the trail management consideration, the revised Plan contains guidelines for acceptable non-motorized trail mixed use and user education to promote trail etiquette.” The appropriate allowed uses on any given trail are determined on a project-level, site-specific basis. Opportunities exist for collaborating or commenting on project-level proposals, planning, and decisions. Proposed Plan direction also supports collaborative trail planning.

Unsustainable trail locations can degrade aquatic resources. Although the USFS recognizes the cultural history of the Southern Appalachian Mountains and ecological impacts from past uses such as industrial logging, the agency manages using the best available science for the current social and ecological conditions. Three desired conditions included in the Dispersed Recreation section of the Plan reference sustainable trails and use without impacts to ecologically and culturally sensitive areas, among other conditions. If these desired conditions could be met by retaining and repairing an unsustainable stream-side trail, it would be considered at the project-level with input from collaborators and the general public.

Comment: Commenters do not support restricting cross-country travel by horse and mountain bike and the standard to restrict those uses to trails designated for their use until multi-use trail needs and opportunities are collaboratively evaluated and met first, noting crowding on some trails and including some support for establishing new trail segments. There was reference to the need for analysis of the impact of restricting all bike and horse use to the trail system. Conversely, some commenters want the proliferation of bike trails to be limited. Other commenters request the completion of trail inventories and evaluations using user data before cross country travel is restricted and still others want connectivity of trails to be maintained and increased.

Response: This issue was discussed extensively with members of the Stakeholders Forum, Nantahala-Pisgah Partnership, and other representatives from equestrian and mountain bike user-groups; including leadership of Back Country Horsemen of America (NC) and Southern Off-Road Bicycle Association. All parties agreed that keeping equestrian and mountain bike riders on NF system trails would help mitigate erosion, stream sedimentation, and habitat degradation. Although the need for this standard was acknowledged by these representatives,

there were concerns that immediate implementation of the standard without first addressing trail supply/demand issues in certain areas would unfairly penalize users of unauthorized (non-system) trails. To address these concerns, an objective has been added to the Dispersed Recreation section of the plan to require collaborative trail planning to address equestrian and mountain bike trail supply/demand issues in certain Geographic Areas where public comment indicated the need for additional trail miles. An associated set of Geographic Area Goals has also been added. Implementation of the standard restricting horse and bicycle use to designated trails will then be deferred until trail objectives have been accomplished.

The final EIS was updated to include the effects of implementing requiring designated trail use by equestrians and bikers.

In addition, any new trail construction or adoption of unauthorized trails to the system would be subject to standards included in the Dispersed Recreation section, requiring sustainable trail design principles, collaborative planning, and a demonstrated need.

The Plan provides management direction on moving the trail system to a more sustainable condition, which may be achieved through trail maintenance, relocation or new trail construction in conjunction with decommissioning of unsustainable trails or trail segments.

Comment: Commenters expressed the need to reference the importance of recreation throughout the plan, including specific reference to and emphasis on recreation in Geographic Areas, as well as integration of recreation interests in active management projects.

Response: Recreation is considered throughout the plan and incorporated into active management considerations and restoration projects, e.g. within the Integrated Ecozone and Wildlife Habitat Management Approaches section. Included in the forestwide Recreation Settings is a management approach emphasizing working collaboratively to guide development of emphasis areas and place-based recreation settings with consideration for the role national forests play in local communities, to promote a connection to place. The first Objective in the Recreation Settings section emphasizes collaborative developed recreation planning. Improvement or expansion of recreation infrastructure or opportunities will be done on a site-specific basis through collaborative planning for sustainable recreation. The first Dispersed Recreation management approach states that collaborative trail planning may include key representatives of stakeholder groups, volunteer or partner organizations, user councils, community organizations, special use permit holders, and/or state or local governments with an interest in sustainable trail management. A collaborative recreation planning goal has also been added to Geographic Areas where public comment indicated a need.

Comment: Comments suggesting provisions for access to multiple recreational activities and a need to evaluate existing and possible new sustainable recreation opportunities.

Response: Improvement or expansion of recreation infrastructure or opportunities will be done on a site-specific basis through collaborative planning for sustainable recreation as outlined in the Developed and Dispersed Recreation sections of the Plan.

Comment: Commenters do not support additional recommended wilderness if mountain biking opportunities do not increase, particularly in the Eastern Escarpment. Commenters note some trails referenced as “user-created” were old logging roads.

Response: Several Plan components support collaborative trail planning. Regarding the Eastern Escarpment, a collaborative effort has been underway with the local SORBA chapter to improve and expand mountain biking opportunities in the Eastern Escarpment (Grandfather Ranger District) for several years. Those efforts address the supply/demand issues for bike (and horse) trails in an attempt to reduce unauthorized bicycle use in Harper Creek and Lost Cove Wilderness Study Areas. This trail planning collaboration, which began well before the Plan revision comment period, was the model for Plan components related to sustainable trail management. The term used in USFS policy and in the Plan is “unauthorized” trails or routes; which is synonymous with user created trails, social trails, non-system trails, etc. Authorized trails are referred to as National Forest System (NFS) trails or just “system trails”.

Comment: Commenters request an increase in mountain biking opportunities (some noting specific areas) including repairing existing trails and reference to use of non-system trails, closure of existing trails and adding constructed features.

Response: There is a desired condition of an ecologically, socially and financially sustainable system of trails referring to each user type within the Dispersed Recreation section. An objective was added to the same section requiring collaborative trail planning to address equestrian and mountain bike trail supply/demand issues in certain Geographic Areas. An associated set of Geographic Area goals has also been added. A standard addresses design and maintenance of trails and another standard outlines conditions for new trail construction or adoption of unauthorized routes as system trails. No existing NFS trails designated for mountain bike use would be changed or eliminated under the new Plan. Constructed wooden challenge features are more appropriate to the many private, county, or city bike parks in the area. National Forests provide a less developed trail experience in a natural-appearing setting. Project level trail management decisions referencing specific areas are made by Ranger Districts considering broader collaborative trail planning.

Comment: Commenters request more and diverse equestrian trails, including trails in designated wilderness, be added to the trail system. Other commenters request a clearer definition of financial sustainability.

Response: Plan standards have been modified through a collaborative process with equestrians and others to reflect this concern, included in the Congressionally Designated and Recommended Wilderness sections. Consideration of new equestrian trails in wilderness or recommended wilderness would occur on a case-by-case basis following Plan direction for sustainable and collaborative trail planning and management. Additionally, the desired condition for the trails system is that it is ecologically, socially and financially sustainable providing high quality experiences across a range of setting for each use-type guided by a similar standard.

Included in the plan is this reference: Financial sustainability should consider available resources for initial construction and long-term maintenance, such as agency allocated funding,

fee or permit revenue, grants, endowments, contributions from volunteer or partner organizations, etc.

Comment: Commenters suggest equestrian use of OHV trails when OHV use is limited.

Response: The OHV trail systems are typically closed during winter for maintenance. Allowing equestrian use at this time would interfere with heavy equipment trail maintenance and be unsafe for equestrian users.

Comment: Comment stating equestrian campgrounds should be available only to trail riders.

Response: This was discussed with District personnel and was concluded that non-equestrian campers don't negatively impact campsite availability for equestrians to the degree that would warrant the comment's recommended change. If such restrictions are determined necessary in the future, site specific management decisions could be implemented to address visitor concerns. Additionally, campground utilization is paramount to financially sustainable operations. There are horse camps on the forests that are reservable online.

Comment: Commenters note a need to maintain or increase equestrian trails and parking, along with user conflicts with mountain bikers and non-equestrian use of equestrian parking. Other commenters also request attention to trailhead functioning and maintenance.

Response: There are desired conditions included in the Dispersed Recreation section that include ecologically, socially and financially sustainable trails that provide high quality recreation experiences for each use-type and with high visitor satisfaction, minimal conflict between users. A second desired condition is that trailheads are appropriately designed for their intended use and well maintained. In the same section is a guideline that mixed use non-motorized trails should be accompanied by educational efforts to reduce user conflicts encouraging all trail users to work together. An objective has been added to the Dispersed Recreation section of the plan to require collaborative trail planning to address equestrian and mountain bike trail supply/demand issues in certain Geographic Areas. An associated set of Geographic Area Goals has also been added. Specific improvements are addressed at the project level.

Comment: The Partnership recommends the addition of an objective to address lack of horse trailer parking to access the Buncombe Horse Range Trail.

Response: Although site specific improvements are considered at the project level, the proposed desired condition supports the need for properly designed trailheads. "REC-DC-29 Trailheads are appropriately designed for their intended use and well maintained."

Comment: Comment requesting 20 new loop trail proposals be considered during the life of the plan.

Response: There is a tier 2 objective within the Dispersed Recreation section intended to construct 10 new loop trail opportunities if resources are available, however this Objective does not limit the overall number of new loop opportunities which could occur over the life of the Plan. There has also been another objective added which provides for collaborative trail planning on a recurring basis, and additional loop trails could be proposed through this process.

Comment: Commenters felt there was not enough emphasis on hiking in the plan, wanting to preserve hike-only trails rather than convert them to multi-use trails, assurances of safety and sustainability, permanent designation as hike-only for some trails, requiring other user-types to mitigate for their impacts to trail conditions as a consideration for continued hiker volunteer maintenance support of those multi-use trails; and inclusion of long-time, experienced trail maintenance clubs in all new trail planning.

Response: The Dispersed Recreation section of the Plan includes desired conditions of sustainable trails that provide high quality recreation experiences across a range of settings for each use-type. The Plan also has a management approach that lists indicators of trails of higher priority to manage and maintain most often noting hiking trails and edited to be more inclusive of all hiking trails. A quarter mile buffer around National Recreation Trails, all of which are hike-only trails in this Plan, was included; and the Appalachian National Scenic Trail is managed as its own unique management area.

A management approach notes the need to collaborate with key partners and to consider all management implications prior to re-designation of hike-only trails. Additionally, there is a standard in the Dispersed Recreation section of the plan identifying several conditions required for construction of new trails. The standard and desired conditions emphasize collaborative trail planning and management with all interested parties. It is not appropriate to cite or credit specific partner organizations in a Forest Plan, nor give one organization's input more weight than another organization, local government, or member of the public. Interested parties are encouraged to participate in collaborative trail planning at the project level. Recognition for volunteer organization contributions and accomplishments is done by District Rangers, typically at annual organization meetings or awards ceremonies.

Comment: Commenters did not want construction of new roads, multi-use trails or motorized use trails to be favored over new hiking trails, noting the restriction of new trail miles and reference to an increase of seasonally open roads. Commenters also perceived a higher prioritization given to motorized trails within the list of priority indicators. By contrast, other commenters desire more motorized access, some noting an aging population, while others reference the existing network of roads and requests for more hunting access.

Response: The Plan was modified and now allows for new trail construction under certain conditions, emphasizing sustainability and collaboration in trail planning and management in the Dispersed Recreation section. There are objectives in the Transportation and Access section that reference no net decrease in miles of open roads in Interface and Matrix to assure access to the forest and a Tier 2 objective of increasing existing seasonally opened roads rather than creating new roads, prioritizing recreation access. The Management Approaches within the Dispersed Recreation section notes that maintaining motorized trails is subject to funding availability. No such condition is imposed on management of non-motorized trails. There is also a standard limiting the expansion of motorized trails.

Newly constructed or improved trails are compliant with Forest Service Trail Accessibility Guidelines (FSTAG) intended to ensure access opportunities to the aging population and those with mobility impairments.

Comment: Commenters referenced a need for additional human and financial resources to maintain existing trails and their attributes, with reference to the current significant contribution of volunteers toward these efforts, the need to reduce maintenance backlog and negative impacts to surrounding resources, the economic and recreational benefits to local communities, summer camps and guides; and the importance of management input from and interaction with local Ranger Districts and trail maintainers. Also expressed was concern that new trail priorities will be too heavily influenced by organizations that can provide additional volunteers. Additional commenters request an emphasis on recreation over economic benefits from timber harvesting.

Response: National Forest volunteers are highly valued, accomplish a substantial amount of work on public lands, and are the primary means of performing routine trail maintenance on the forests. Even with this support, only approximately 35% of trail miles meet USFS National Quality Standards. Successful trail management requires utilization of multiple funding and labor sources, focusing allocated budgets on leveraging other opportunities, such as grants, volunteers, partnerships, and contracted services. The Plan has many components in support of sustainable trail management, including financial sustainability which can be partly achieved through effective utilization of volunteers.

The purpose of the Plan is to have an integrated set of direction to provide for social, economic, and ecological sustainability and multiple uses of the Forest's lands and resources. The Community Connections section Introduction states: The Forests contribute to local quality of life, creating opportunities for sustainable economic development through tourism, recreation, and timber harvest among other multiple uses and benefits. And this objective in the same section: Every year host a discussion at the supervisor's office with interested WNC local governments or their economic development offices to foster shared actions that support local jobs, attract tourism, and encourage coordination on public health and safety issues. Within the Recreation Settings section is included the following desired condition: Recreation activities across the Forests contribute to the sustainability of the social and economic values of the local communities through jobs and income in the local economy, community stability or growth, and the quality of lifestyles in the area. Each Geographic Area has Goals to provide economic benefits to local communities. Social, economic and cultural sustainability are also addressed in the monitoring program.

Many Plan components require collaborative trail planning, which emphasizes engagement with user groups, user councils, volunteers, partners, special use permittees, county governments, and others. The vast majority of collaborators are local groups, representing their specific trail interests. However, the Plan makes no distinction between trails with predominantly local use vs. non-local use. Both types of use are important for recreational benefits to users and local economies. All trail planning efforts originate, are approved, and are implemented at the District level, with support from Supervisor's Office staff. A new objective was added to the Dispersed Recreation section of the Plan calling for collaborative trail planning across all Geographic Areas every 5-7 years. A recreation standard has been updated to include commitment to long term maintenance of trails as one of the optional conditions for new trail construction. The role of volunteerism in FS trail maintenance is critical to the sustainability of the trail system. New trail

proposals with strong support and commitment for maintenance from a volunteer organization will and should be prioritized over those with no commitment.

Providing quality trail information and maps is identified as a desired condition in the Plan along with the condition of sustainable trail use with minimal user conflicts or impacts to ecologically or culturally sensitive areas, as well as included in a standard within the Dispersed Recreation section.

Comment: Commenters referenced degraded trails and the need to prioritize their maintenance utilizing trail standards, some suggesting rotating trail use or adding fees.

Response: The Plan provides management direction on moving the trail system to a more sustainable condition, which may be achieved through trail maintenance, relocation or new trail construction in conjunction with decommissioning of unsustainable trails or trail segments through collaborative trail planning. The USFS has agency wide trail design parameters and National Quality Standards for trails. A dispersed recreation management approach identifies National Recreation Trails as a priority for maintenance. Large maintenance projects take many years to accomplish, including securing funding, managing contracts and implementation with the support of volunteers. Specific trails are managed at the Ranger District level. Trail condition assessments and decisions on maintenance needs, temporary closure, or decommissioning are made at the project level.

Comment: Commenters are concerned about the frequency and impact of mountain bike races.

Response: Forest Service permits are handled on a case by case basis. All special use permits state that the holder shall be liable for any damage or other costs connected with rehabilitation or restoration as a direct result of their use. In the Lands and Special Uses section of the plan it states that special uses will be managed to support and contribute to the protection of natural resource values and the promotion of public health and safety; and, compatible with visitor use, site capacity and recreation management.

Comment: Commenters want trail and bridge development and maintenance, along with trail conversion to multi-use, to be overseen and regularly monitored for recreation and other resource protection, along with user experience; and in conjunction with relevant partners and trail users.

Response: Multiple desired conditions and standards direct sustainable trail management, which includes consideration of potential resource impacts associated with trails. Agency policy requires random trail condition inspections annually, and condition inspections for all trail bridges on a 5-year cycle. Trail bridge repair or replacement is a priority when seeking construction funds, grants, or partner support at the project level. The Plan emphasizes trail planning and design using state of the art principles, collaboration with stakeholders, and consideration of potential user conflicts.

Comment: Commenters questioned the impact on mountain biking in the Craggy Mountains area in association with potential wilderness recommendation.

Response: The Plan responds to public comments supporting an expanded Craggy Mountain wilderness recommendation, enhanced scenic protections (as a forest scenic area), continuing

to provide a range of dispersed recreation opportunities, and limiting vegetation management activities in the Big Ivy area (depending on the management area allocation). None of the recommended wilderness boundary configurations analyzed include existing mountain bike and equestrian trails.

Comment: Commenters pointed to mountain biking as the cause of destructive trail impacts. Other commenters pointed to general recreation use as the cause of impacts to water quality and other natural resources.

Response: The Plan provides management direction on moving the trail system to a more sustainable condition, which may be achieved through trail maintenance, relocation or new trail construction in conjunction with decommissioning of unsustainable trails or trail segments. It also emphasizes trail planning and design using state of the art principles, collaboration with stakeholders, and consideration of potential user conflicts. There is also a standard that requires equestrians and mountain bikers to remain on system trails designated for those uses, with an exception for lawful big game retrieval.

Comment: Commenters oppose the zero-net gain in trail miles concept proposed in one of the analyzed alternatives.

Response: The Plan includes a standard within the Dispersed Recreation section that has several conditions for new trail construction including collaboration and sustainability and no cap on system trail miles

Comment: Commenters want the freedom to place or replace fixed anchors within designated or recommended Wilderness without red tape or a permitting system.

Response: The Plan has no restrictions on use of fixed anchors for climbing, except for requiring line officer approval for installation or replacement of fixed anchors within designated and recommended wilderness. These standards have been updated to clarify that line officer approval is to ensure there are no impacts to natural or cultural resources, or wilderness values. Line officer approval associated with this standard is not referring to a special use permitting process but would be an informal review and approval process conducted collaboratively with representatives of the climbing community. The Standard also requires that non-reflective or camouflage anchors be used.

Comment: Commenters want recommendations and data provided by climber groups to be considered in management of climbing opportunities.

Response: The objective outlining the collaborative development of a climbing management plan as stated within the Dispersed Recreation section of the plan now includes direct reference to data and other input provided by users to develop area-specific management direction, consideration of user desires to improve the climber experience, identify access trails suitable for addition to the system, climber education, resource protection measures and monitoring protocol.

Comment: Commenters recommend forestwide climbing direction in the plan rather than some direction in the forest plan and other decisions to be included in a future climbing management plan.

Response: The Tier 2 of a Dispersed Recreation Objective proposes collaborative development of a Nantahala and Pisgah National Forest climbing management plan and was based on Access Fund and Carolina Climbers Coalition comments in 2013, during the assessment phase of Forest Plan revision. The objective to create a climbing management plan has added language that includes utilizing inventories of climbing routes, access trails, staging areas, and other information provided by users to develop area-specific management direction following the latest agency policy on climbing and similar activities.

Comment: Commenters want more balance between resource protection needs and recreational climbing access and to include more collaboration and education as management strategies rather than blanket prohibitions or closures.

Response: In the Dispersed Recreation section of the Plan, the Objective to develop a climbing management plan has been updated to include collaboration with the climbing community to improve climber experience, identify resource protection needs, and provide opportunities for climber education. Updated standards reference resource protection guided by the climbing management plan which can be identified on a site and resource specific basis.

The draft Plan does not propose changing access to climbing opportunities, but protection of threatened or endangered species and cultural resources is required by law, regulation, and policy. Where unauthorized climbing access routes adversely impact resources, protective actions must be taken.

Comment: Commenters noted restrictions on climbing would negatively impact local economies.

Response: A desired condition in the Dispersed Recreation section of the plan states that recreation activities across the Forests contribute to the sustainability of the social and economic values of local communities. There is also an Objective outlining the development of a climbing management plan providing the opportunity for collaboration on recreation planning and identification of site-specific resource protection needs.”

Comment: Commenters point to the variety of types of climbing to be referenced in the plan beyond “rock climbing”.

Response: References to "rock climbing" in the final Plan have been changed to the broader reference "climbing" or “climbing and similar activities”. Due to the variety of recreational activities occurring on national forest lands, it's impossible and unnecessary to list each activity type in a Forest Plan.

Comment: Commenters offer to help maintain climbing access trails.

Response: An objective was added to the Dispersed Recreation section of the Plan to include collaborative trail planning on a recurring basis. There is a desired condition of involving partners and communities in planning and management efforts. A standard requires collaborative engagement with interest groups when planning new trails or adopting unauthorized routes. There is also a standard which states hiking is allowed anywhere on the forest unless the area or route is closed by forest supervisor order. There is Forest Service policy

prohibiting the maintenance of unauthorized trails, though climbing access trails could be analyzed for potential addition to the system.

Comment: Commenters support continuing collaboration around Peregrine falcon conservation.

Response: Language has been added to the goals of appropriate Geographic Areas to include continued collaboration with the climbing and recreation community.

Comment: Commenters request trail access for e-bikes, some referencing to the American's with Disabilities Act (ADA), while others do not want e-bikes on non-motorized trails.

Response: The increase in popularity of e-bikes is recognized, but they are considered motorized vehicles and subject to restrictions of Forest Service travel management. Draft Plan components allow for e-bike use on motorized trails and for potential designation of existing or new mountain bike trails within limitations of the latest agency policy and/or guidelines. However, designating mountain bike trails for e-bike use would be a project-level decision and potential conflicts with other uses would be considered in the analysis.

The ADA does not contain provisions for use of e-bikes by the mobility impaired. The ADA and USFS policy define a wheelchair as a device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion and that is suitable for use in an indoor pedestrian area. On National Forest lands, a person whose disability requires use of a wheelchair or mobility device may use a device that meets this definition anywhere foot travel is permitted (36 CFR 212 .1, Forest Service Manual 2353.05 and Title V of the Americans with Disabilities Act).

Comment: Commenter requests expansion of low impact boating amenities.

Response: Development of site -specific amenities is a project-level decision.

Comment: Commenter requests to be involved in the planning processes for road management.

Response: There is a Tier 1 objective in the Transportation and Access section of the Plan to develop and implement a forestwide road maintenance plan that identifies priority maintenance activities, funding sources, and performance responsibilities over the life of the plan. The work presented in this plan is prioritized to promote public safety, prevent erosion and sedimentation, protect water quality, and maintain access to the Forests with an emphasis on priority watersheds.

Comment: Commenter requests edits to the description of sustainable recreation, a description of desired conditions and indicators as they relate to Recreation Opportunity Spectrum (ROS) settings; a discussion of the changes to the inventoried ROS classes; guidance included for sustainable recreation and how it relates to the requirement to address sustainable recreation resources; a request for the addition of a "Rural Forested" addition to ROS; and a reference to improvements to recreation settings. Commenters also request addressing the impacts of motorized use on the forest.

Response: The definition of sustainable recreation was edited in the FEIS. A desired ROS map has been added, ROS settings definitions have been updated and Scenic Integrity Objectives definitions are consistent with the Forest Service Manual 2310 amendment. Additionally,

desired scenic character and desired ROS setting have been included for all Management Areas. Corresponding changes/references will be made in the FEIS. Planners did not find it necessary to subdivide the Roaded Natural setting. A desired Scenic Character theme of Rural Forested is included in the Plan. ROS itself is about recreation impacts from motorized use and infrastructure development.

Comment: Commenters request a 3-year timeframe to implement collaborative recreation planning.

Response: The Recreation Settings Plan section Tier 1 objective addressing a more sustainable developed recreation program includes reasonable timeframes for Tier 1 objectives. Language was updated to clarify that this objective refers to developed rather than dispersed recreation. An additional objective was added requiring collaborative trail planning. Both of these Objectives emphasize the importance of collaborative planning for sustainable recreation.

Comment: Commenter believes casual non-commercial mineral collecting happens on specific high use areas and should be identified and that surface-penetrating tools should be identified.

Response: Areas where surface-penetrating tools can be used is what will be identified. Surface penetrating tools will be further defined through collaboration with user groups during the process of identifying designated areas.

Comment: Commenter requests using federal funds to maintain the range of trails and open more campgrounds and other amenities to address increase in use.

Response: Appropriated funds are already used to maintain trails. Development of new infrastructure, such as new campgrounds, is not likely.

Comment: Commenters request being notified in advance of active management projects that could impact the recreation experience. Other commenters requested more information on fishing opportunities.

Response: Though this is not a Plan-level issue, the Plan does encourage the involvement of the public in project planning and noted in the Public Involvement desired condition section and in the Community Connections section desired condition of high-quality public information.

The North Carolina Wildlife Resources Commission regulates fishing in North Carolina. NCWRC has a fantastic interactive fishing map.

Comment: Commenters suggest adding a desired condition that dispersed recreation settings are welcoming to a diverse population of users both in terms of design and management. An objective could include understanding where barriers exist by committing to meeting with 2 years with groups that work on equity in the outdoors and with communities of color in the plan area to understand and address barriers to access and use. You could include a management approach with a focus on training, similar to the one included in the tribal resource section.

Response: There are desired conditions, objectives and standards within the Dispersed Recreation section of the Plan that call for collaborative trail management and planning on a regular basis. The first of the Plan's four themes is Connecting People to the Land, which includes a reference to cultural diversity and improving inclusivity and diversity. The Partnering

with Others theme notes the Plan's emphasis on expanding the diversity of forest visitors. Inclusivity is referenced in the Collaborative Capacity theme of the Plan. The Public Involvement Management Approaches section of the Plan states employees will provide high quality customer service, striving to create a management environment characterized by inclusivity. Two desired conditions for Community Connections section address relationships with non-traditional users, strengthening connections with surrounding communities; and, noting all communities are served by the Forests, including historically underserved populations. Additionally, it lists diversity of visitors, volunteers, and partners continues to grow through existing and new relationships; and citizen involvement becomes more representative of local community and the nation's demographics and interests. Diversity is also addressed in the management approaches for the Community Connections section. Desired conditions for the Conservation Education and Interpretation section include the programs are culturally inclusive, engage diverse audiences and invite diverse visitors to the Forest and a management approach that guides the forest to build relationships with community programs that help ensure the delivery of public services reflects the diversity of the American public. The section goes on to list the diverse range of audiences to be addressed.

Comments: Commenter requests managing more miles of deferred maintenance of OHV trails and adding a Tier 2 to eliminate OHV deferred maintenance.

Response: Quantities identified in Objectives are not intended to be a limitation. They are a minimum accomplishment and could be exceeded if resources are available.

Comment: Commenter stated there was no local economic benefit from boating water releases on the Cheoah River.

Response: The current relicensing settlement agreement specifies the number of releases per month, which do in fact regularly occur during the boating season. The only way to get additional releases is through a change in the relicensing settlement agreement through FERC. The number of releases was determined based on mimicking historical flood regimes necessary for the health and productivity of the endangered species found in the river; recreational boating is a secondary benefit and not the driving force behind the number or timing of the releases.

Comment: Commenters recommended specific projects across the forests, including increased dispersed campsites and better management of backcountry campsites. Commenters also referenced items beyond the scope of a forest plan such as the importance of restraining domestic pets and providing shuttle services.

Response: Desired conditions for all recreation settings across the forest reflect healthy and resilient landscapes, provide a diverse sense of place for community residents and visitors, and connect people to the land through high-quality and safe sustainable recreation opportunities and valuable outdoor experiences. However site-specific decisions on recreation management are made at the Ranger District and project-level issues are beyond the scope of the Forest Plan revision process.

A desired condition in the Conservation Education section states: Low impact recreation principles, such as “leave no trace” and “tread lightly,” are promoted and widely used by the public. There is also an objective in the Dispersed Recreation section that states: Tier 1: Develop an operation and maintenance guide for all designated dispersed campsites containing provisions for public health and safety and protection of water, aquatic, and riparian resources. Additionally, there is a standard in the Congressionally Designated Wilderness section disallowing permanent camps except those associated with the ANST, in keeping with the Wilderness Act. There is also a management approach in the Congressionally Designated and Recommended Wilderness sections stating when the concentration or expansion of user-created campsites affects wilderness character, or natural or cultural resources, close and rehabilitate campsites using appropriate and currently accepted techniques.

Restraining domestic pets is addressed in the Code of Federal Regulations 261.16 (j).

Comment: Commenters requested mapping additional recreation opportunities in the Bluff Mountain area.

Response: The USFS maps have been updated to include these opportunities.

Comment: Commenters requested the plan recognize that timber production and associated actions are not aligned with some ROS classes, including Primitive, Semi-Primitive Non-Motorized (SPNM) and Semi-Primitive Motorized (SPM) ROS classes. They add timber harvest is not an objective for the Appalachian National Scenic Trail (ANST) and Backcountry Management Areas.

Response: A forestwide standard states that timber production will not be the primary purpose for projects and activities and shall complement the ecological restoration desired conditions and objectives. The desired ROS setting for Matrix management area, which is the largest area suitable for timber production, does not include desired Semi-Primitive Non-Motorized ROS settings. There are some desired SPNM settings in Interface, but they are generally in inaccessible areas, such as islands in reservoirs or shorelines where timber production is not likely to occur. After review of policy and the ROS User's Guide, it was confirmed that management of Semi-Primitive Motorized settings is not inconsistent with activities potentially occurring on lands suitable for timber production; especially if Scenic Integrity Objectives are being met. The ROS User's Guide and Forest Service Manual 2310 amendment say SPM settings are (predominately) natural or natural-appearing and the guide says they may have moderately dominate alterations. Neither says SPM settings do not allow timber production. For the other comments regarding the ANST, Plan components were updated to emphasize vegetation management for purposes benefitting the ANST experience and values. Timber harvest is allowed and appropriate in the ANST management area to maintain or enhance ANST values or visitor experience, and revised components were drafted in coordination with Appalachian Trail Conservancy and National Park Service.

Comment: Commenters recommend a new standard stating user-created trails created after the collaborative trail planning process will be promptly decommissioned.

Response: A desired condition in the Dispersed Recreation section of the Plan states unsustainable trails are transitioned to a sustainable condition utilizing state-of-the-art trail

design principles or are decommissioned and rehabilitated. Another desired condition in the same section states unauthorized trails are closed and rehabilitated to prevent erosion and restore vegetation or are improved to meet trail standards and added as a National Forest System (NFS) trail through a collaborative planning process. There are also standards listing when trail decommissioning should be considered.

Comment: Commenter wants to see more recreation opportunities included in the plan.

Response: A desired condition of Recreation Settings states "Resources, skills, energy, and enthusiasm of partners and communities are engaged to maintain or enhance recreation settings on the Forests." There is also a management approach in the same section stating, "A mosaic of funding sources (including grants, volunteers, permittees, partners, and concessionaires) is used to provide or enhance recreation opportunities, leveraging resources where possible." A developed recreation management approach states "Consider new recreation sites and significant improvements to existing sites when they can be sufficiently maintained and managed for long-term through a combination of agency and partner support and where they support niches identified in Geographic Areas." All of these Plan components are included in Alternative E, as well as a standard that eliminates a trail mileage cap or trail bank in favor of collaborative planning for sustainable new trail construction.

Comment: Commenters request inclusion of climbing as a wilderness value and activity and collaborating with the climbing community to educate the public on these values and activities.

Response: A National Forest Land Management Plan is inherently permissive; therefore, it is not necessary to list every possible recreational activity which is allowed, though reference to climbing was added in the designated and recommended wilderness sections of the Plan. Collaboration with the climbing community and utilization of their area-specific knowledge in development of a climbing management plan has been included in a Dispersed Recreation objective.

Comment: Commenters recommend increasing opportunities for disabled hunters, requesting replacing old gates with ADA-accessible gates for access to linear wildlife openings.

Response: A Forest Service interdisciplinary team reviewed the Plan and found it adequately address and emphasizes opportunities for recreation users with disabilities. Access around road gates will be planned on a case-by-case basis with each Ranger District.

Comment: Commenters recommend hiring youth to assist with trail maintenance.

Response: The Nantahala and Pisgah National Forests actively engage Youth Conservation Corps and Public Lands Corps crews every summer to perform trail maintenance and other resource management needs and will continue to do so.

Comment: Commenters suggest educating forest users on the health and management of the forest as relates to recreation experiences. Others note the work they do to educate the public. There was also a request to see more education about responsible recreation, recreation impacts and management, including incentives for responsible use.

Response: Conservation Education and Interpretation section desired conditions states education and interpretation is integrated as a component in all program areas to facilitate public understanding of the resources and their management; opportunities connect people with nature and enhance the public understanding and appreciation for the natural, cultural, tribal history, and the multiple-use mission of the Forests. Conservation education programs and activities contribute to connecting people to the land and to each other. Additionally, through a variety of educational and interpretive efforts, people learn about biodiversity, botanical communities, wildlife and aquatic species, ecosystems, tribal, heritage and other cultural sites, hunting and fishing heritage and geology resulting in a motivation to practice careful stewardship. Education themes include sustainability, safety, and user ethics, and support National Forest Service education themes. Conservation education and interpretation efforts emphasize a land ethic that informs how to reduce impacts on ecosystems and supports the Forests' efforts to protect natural resources. Low impact recreation principles, such as "leave no trace" and "tread lightly," are promoted and widely used by the public. Forest Service employees promote a connection to place, foster a sense of stewardship, and help move the Forests toward sustainable conditions through education efforts and partnerships. Accurate, high quality visitor information is available through multiple media sources with an emphasis on consistency, accessibility, convenience, and quality and enhances visitor experience and safety.

The Conservation Education and Interpretation section of the Plan supports those efforts with the following management approaches: To expand capacity to deliver conservation education, build working relationships with other Federal and state agencies with a conservation mission; public, private schools, and universities; and non-profit organizations; and maintain memberships with professional resource management and educational associations. Manage the conservation education and interpretive services programs to avoid duplication with other providers whether in public or private sector. Another management approach is to build relationships with community programs that help ensure the delivery of public services reflects the diversity of the American public. When promoting conservation education, encourage participation by urban and rural communities, tribes, youth, minority, and low-income populations.

Comment: Commenters raise the importance of acknowledging the work of the Civilian Conservation Corps and others.

Response: Desired conditions within the Conservation Education and Interpretation section of the Plan include: Conservation education and interpretation is integrated as a component in all program areas to facilitate public understanding of the resources and their management.

Interpretation and conservation education opportunities connect people with nature and enhance the public understanding and appreciation for the natural, cultural, tribal history, and the multiple-use mission of the Forests. Conservation education programs and activities contribute to connecting people to the land and to each other. Additionally, a Forest Plan is intended to provide direction for management of multiple resources on National Forest System Lands. Group and individual volunteer recognition is done by District Rangers as appropriate.

Comment: Commenters request traditional uses such as timber cutting, hunting, shooting, trapping, fishing and horse riding be given equal priority as is given to hiking, biking, bird watching, rock climbing, etc.

Response: The Desired conditions of the Dispersed Recreation section of the Plan include that the Forests provide high quality wildlife-based recreational opportunities, including hunting, fishing, and wildlife viewing. Wild and stocked recreational fishing continue as popular recreational activities in waters where those opportunities are not in conflict with the recovery of native species. Another desired condition is a sustainable road and trail network provides access to hunting, fishing, and other recreation activities that connect people with nature.

SCENERY

Comment: Numerous commenters offered support of Plan components for scenic resources while others requested protection of viewsheds from potential impacts associated with timber management.

Response: All proposed actions which may visually alter scenic character must undergo a project-level scenery impact analysis of potential visibility and effects as outlined in the Scenery section in Chapter 2 of the Plan. Proposed actions must also meet desired Scenic Integrity Objectives for each management area.

Comment: Commenters suggested decisions about the impacts on scenery be left to the District Ranger overseeing the project rather than the forest Scenery Specialist and some suggested the scenery section needed to be rewritten.

Response: Forest Service Manual 2380 at 2381 states: "Use the knowledge, skills, and abilities of landscape architects to meet the goals of aesthetics, scenery management, and environmental integrity on National Forest System lands". The Forest Landscape Architect is the scenery management specialist, so this Plan component follows established agency policy. Furthermore, the process used in developing draft Plan scenery components follows agency policy, regulations, and law.

Comment: A commenter requests Scenic Character and Scenic Integrity Objectives be established and mapped, not generalized, including mapping within the Plan, and included for each alternative in the EIS. Additionally, the commenter requests scenery management be integrated into other plan components, including recreation and the Recreation Opportunity Spectrum.

Response: Scenic Character is described for each Geographic Area, which are mapped in the draft Plan. Additionally, desired Scenic Character is identified for each management area with spatial reference to mapped ROS settings. Desired Scenic Integrity Objectives are identified for inventoried Scenic Classes in each management area, and the Scenic Class map is included as a reference to the Plan. Therefore, desired scenery components are spatially defined in great detail and analysis by alternative is included in the FEIS.

Comment: Commenters requested modified scenery objectives for the Matrix management area.

Response: Desired Scenic Integrity Objectives are identified for Matrix and all management areas to achieve the desired Scenic Character. The range of desired SIOs in Matrix management area are appropriate for the inventoried Scenic Class.

Comment: A commenter suggested a change in scenery management as the forest progresses toward restoration.

Response: The desired SIOs for each management area and Scenic Class combination do not change through time unless the Plan is amended to change management direction or management area allocation. Management areas which emphasize restoration have desired SIOs of Moderate or Low for Scenic Class 3-7, which is intended to accommodate the aesthetic changes which may result from restoration activities.

Comment: Commenters request listing national trails and popular recreation destinations and how they are addressed in the scenery section.

Response: All nationally designated trails and high use recreation areas were included in the development of the Scenic Class inventory as Concern Level 1, as described in the EIS. Therefore, the Scenic Class inventory map depicts those areas and lands visible from those areas as Scenic Class 1 or 2. See the EIS scenery management section for more details.

Comment: Commenters request stronger protections of viewsheds for nationally recognized trails; and buffers to protect trails from management activities and to protect the quality of the hiking and biking experience.

Response All proposed actions which may visually alter landscape character must undergo a project-level scenery impact analysis as outlined in the Forestwide Scenery section of the Plan, and meet the desired Scenic Integrity Objectives identified for each management area. Proposed activities visible from locations with national or regional significance have a more restrictive SIO assigned. For nationally designated trails: the Appalachian National Scenic Trail has a protected management area of the visible foreground up to a mile wide (½ mile each side); National Historic Trails also have a dedicated corridor management area; and National Recreation Trails have a ½ mile corridor (¼ mile each side) in Interface management area. Each of these special considerations provide protection to the scenic, recreational and cultural resources for these nationally significant trails.

Comment: A commenter suggested a change from “landscape character” to “scenic character”, suggesting FSH 1909.12 was not followed.

Response: The term “Landscape Character” (from the Scenery Management System) has been updated to “Scenic Character” in the Plan and FEIS.

Comment: A commenter suggested there was not a need to consider NFS system roads used as trails for potential viewpoints to be analyzed for scenery impacts.

Response: The current and draft Plan identify NFS roads used as trails as potential viewpoint locations for analysis of scenery impacts associated with proposed actions. This direction has been in place since the current Plan was signed in 1987.

Comment: A commenter requested scenery classifications only apply to priority scenic areas.

Response: Development of the Scenic Class inventory was conducted using methodology described in the USFS Scenery Management System and is consistent with agency policy.

Random locations across the Forest were selected to analyze the difference in desired SIO in the draft Plan using the Scenic Class inventory, and VQOs in the current Plan using the scenery inventory prepared for the 1987 Plan and 1994 amendment. In most cases, there was no difference in desired SIO and comparable VQO, regardless of changes in management area allocation.

CULTURAL AND HISTORIC RESOURCES

Comment: We encourage and support all efforts to preserve the vast cultural resources discussed in the Cultural Resources section of the plan.

Response: Thank you for your comment. The Forest Plan supports managing cultural resources to protect their cultural, historical, and archeological values in the Cultural Resources section.

TRIBAL RESOURCES

Comment: The forest plan revision process has allowed the EBCI to have a substantial voice in the shaping of the plan. EBCI commended the USFS's efforts to work closely with EBCI staff and integrate EBCI concerns and priorities into many of the Forest-wide Plan Components. The EBCI is pleased to see that the plan contains strong language requiring managers to continue two-way conversations and meaningful, frequent consultation with the EBCI as the plan moves toward implementation.

Response: The Plan was developed in consultation with Federally Recognized Tribes, and the plan recognizes that tribes and tribal members are partners in managing forest resources. We appreciate the opportunity to work together and look forward to working with tribes during plan implementation. The forest plan is designed to: recognize the interconnectivity of managing forest natural, social and cultural resources; support wildlife habitat and diversity that contributes to populations; support cross boundary work to support aquatic populations; and support sustainable recreation into the future.

Comment: EBCI commends the inclusion of the provision of clean and abundant water as a basic human right as a central theme of the forest plan.

Response: Thank you for your comment. Clarification was added to the Water section and the theme description for "Providing Clean and Abundant Water" that clarifies that connection between water on NFS and tribal lands.

Comment: The EBCI requested expanded forest-wide monitoring and effective enforcement actions across the forests to protect Tribal resources, particularly plants, for future generations.

Response: The final plan includes a monitoring question that addresses sustainable plant harvesting and the application of traditional harvest methods that impact or benefit plant populations?

Comment: Consider including tribal concerns in other sections of forest-wide plan components. Although this may create some redundancy, we see it as valuable to ensure those reviewing subsections of the plan are aware of tribal interests and values. For example, someone consulting the "Non-Timber Forest Products" component of the plan should be informed that "Tribal traditional use of medicinal plants and other botanical resources should take priority over commercial harvesting" without having to reference the Tribal Resources section.

Response: We added clarification to the end of several forest-wide sections including a "see also" statement that directs managers to additional, related plan sections, including Tribal Resources. We also moved plan guidelines related to tribal resources to the nontimber forest products section to ensure they are used alongside other non-timber forest product direction during plan implementation.

Comment: EBCI expressed the following regarding access to resources:

- 1) The EBCI requests a commitment from the Nantahala and Pisgah National Forests to continue to work with the tribe to streamline and improve traditional resource use permitting processes across ranger districts within each forest.
- 2) The EBCI requests consideration of traditional ecological knowledge and access for tribal rights and uses during the design of projects.
- 3) The EBCI has concerns over long term resource availability on their forests due to climate change impacts, which could result in greater dependency on U.S. Forest Service lands. The tribe requests the USFS continue to develop vulnerability assessments and implement effective management strategies that will assist in climate adaptation and priority resource conservation.

Response: The permitting process for traditional uses is beyond the scope of the forest plan decision; however, the Southern Region of the Forest Service is working on opportunities to streamline the permitting process, outside of forest plan revision.

A guideline has been added to the Plan's Forestwide Tribal Resources section to identify that projects should incorporate traditional ecological knowledge in all projects. A management approach has been added to seek involvement from both the natural resources and tribal historic preservation office staff to support regular interdisciplinary involvement in project design.

The updated plan's Chapter 5 Monitoring Program includes monitoring questions about climate change vulnerability assessments. The monitoring guide developed during plan implementation will outline procedures for addressing these questions. The plan is also explicit that partners will be involved in monitoring guide development, including Federally Recognized Tribes. Additionally, management approaches in the Plan's Climate Change section have been updated, reflecting a suite of adaptation and mitigation options in the face of uncertainty.

Comment: Tribes expressed concerns about how wilderness recommendations would impact rights of tribal members to visit, harvest, and gather in places of cultural significance within recommended areas.

Response: The Forest Service will continue to consult with Tribes regarding access to culturally significant places.

Other than prohibitions on use of motorized equipment or mechanical transport per Plan direction for recommended wilderness, there would be no additional restrictions to traditional tribal uses or gathering of plants for personal use that are allowed in other parts of the national forest.

Comment: Research is needed to focus on sustainable plant harvesting, artisan resource management, and the use of traditional ecological knowledge are all important priorities that need continued support and ultimately integration into management actions on the Pisgah and Nantahala forests.

The EBCI requests specific objectives added to the plan to ensure that traditional ecological knowledge is incorporated across the forest.

Response: The final plan includes an objective to work with tribes and the Southern Research Station to identify research locations and collaboratively study sustainable plant harvesting, artisan resource management, and the use of traditional ecological knowledge.

In the final plan, a guideline has been added to the forestwide Tribal Resources section to identify that integrated landscape projects should incorporate traditional ecological knowledge in project design.

Comment: EBCI requests that forest sub-watersheds smaller than the 6th level that drain onto EBCI lands be considered for enhanced protection and restoration to ensure the maintenance of downstream water quality.

Response: The forest plan includes plan components to protect downstream water quality and to ensure that abundant clean water is present on the Forests to meet the current and future needs of people downstream. The Plan's Water section has been updated to reflect that water on the forest reaches land managed by Federally Recognized Tribes. A management approach has been added to conduct work that benefits both tribal and National Forest System lands.

Comment: The EBCI appreciates the commitment to enhance management of the Trail of Tears National Heritage Trail and Unicoi Turnpike with expanded tribal input. There are over 40 linear miles associated with the forced removal and deportation of our ancestors that traverses the Nantahala National Forest and this management plan introduces a mile-wide corridor where extra levels of protection and consultation are introduced. This is the first National Forest to implement such a management strategy, and we hope this guides other National Forests to include similar protocols once this document is finalized. We appreciate the forest planner's assurances that this integral cultural resource is properly respected and look forward to future collaborative management efforts.

Historic trails and pathways outside the Trail of Tears corridor also require consideration and attention during plan implementation.

Response: The management direction for the Trail of Tears was developed in consultation with Federally Recognized Tribes and the Forest Service is honored to have the opportunity to steward this important resource.

The forest plan ensures that historic resources are considered in the design and implementation of management activities, as shown in the cultural resources section in Chapter 2.

Comment: The EBCI is interested in advancing discussions around opportunities presented in the Native American Tourism and Improving Visitor Experience Act (PL114-221) to enhance and integrate Native American tourism into federal management planning, increase coordination and collaboration between tribes and Federal agencies' tourism assets, and expand cultural tourism opportunities.

Response: A desired condition in the community connection section was modified to reflect this comment, "Sustainable Forest settings and opportunities complement regional, local and Tribal programs and tourism strategies, and collaboration with tourism offices is fostered."

Comment: The EBCI would like to see other tribal priority resources, in addition to the Trail of Tears corridor, be specifically mentioned in the Adaptive Monitoring and Management section of the plan. There appears to be a gap in accountability for the Forest Service engaging with tribes regarding the adaptive management of natural resources that may fall outside of consultation obligations required by statute.

The EBCI is interested in exploring opportunities to improve the protection of tribal trust lands by reducing threats on adjacent U.S. Forest Service lands as supported under the Tribal Forest Protection Act, and in cooperative agreements that would enable tribes to perform forest management on USFS lands.

Response: A new desired condition for the final plan was added to the tribal resources section that states: "Lands are guided by shared stewardship, including tribal and Forest Service lands and resources, to support healthy and resilient forests that benefit tribal communities and the public." The final plan also includes a new management approach: "Utilize collaborative and shared stewardship authorities to conduct work that benefits both tribal and National Forest System lands."

Comment: The EBCI appreciates the continued sharing of resources and training opportunities focused on geospatial data management, remote sensing technology, silviculture techniques, and restoration strategies that can improve the long-term management of EBCI forest resources. The tribe would also appreciate continued discussions regarding the ability of the USFS to provide additional planning assistance to assist the EBCI in building its sovereign forest management capacity.

Response: The Forest Service supports the opportunity to continue to share resources and training with Tribes, which is reflected in the management approaches of the Tribal Resources section, "Engage with tribal natural resources staff to share knowledge and manage collaboratively" and "Foster opportunities to engage tribal members in management of forest resources such as through volunteering, tribal agreements, and training."

Comment: Commenters requested respect for tribal needs, and expressed support of tribal plan components, the tribal consultation process, and the plan's acknowledgement of tribes as management partners and encouragement of collaboration with tribes. The Southern Appalachian Wilderness Stewards offered their support for stewardship work.

Response: Thank you for your comments. The Plan was developed in consultation with Federally Recognized Tribes, and the plan recognizes that tribes and tribal members are partners in managing forest resources.

MINERALS AND ENERGY

Comment: The draft Plan's and DEIS lack plan direction and enforceable Standards and Guidelines on mineral extraction and energy infrastructure that would ensure mineral and energy exploration is done in an environmentally friendly manner. The DEIS does not analyze the potential direct, indirect, and cumulative impacts of energy and mineral development on ecosystems, connectivity, biological diversity, soil, water, and geologic resources and associated significant impacts.

Response: The Forest Plan as well as the Federal laws and regulations provide the enforcement framework to achieve the desired conditions and meet the Planning Rule's requirement to maintain ecological integrity and sustainability in the Plan area.

The Plan provides direction and enforceable standards and guidelines that would protect the multiple uses of the forest in connection with commercial mineral extraction and energy development (Forest Plan, Minerals and Energy standards and guidelines).

Laws and regulations applicable to commercial mineral extraction and energy development on National forest Systems lands have well-established enforcement procedures to protect resources and other multiple uses. The U.S. Forest Service and Bureau of Land Management (BLM) use independent authorities to enforce environmental requirements and ensure reclamation on Federal leasable mineral exploration and development. Reclamation helps ensure that any effects of energy development on the land and other resources are minimized. The ultimate objective of reclamation is ecosystem restoration, including restoration of any natural vegetation, hydrology, and wildlife habitats affected by surface disturbances from construction and operating activities at operation sites. If and when the Forest Service consents to BLM mining exploration and development, all environmental regulations would be followed.

The EIS and range of alternatives provide different allocations of management areas with different management direction. For example, the EIS outlines the acres of Recommended Wilderness for each alternative, and the resulting tradeoff in acres of potential withdrawals from the mineral leasing law. The EIS also estimates the acres of potential ground disturbance for leasable mineral exploration and development for each alternative.

Site-specific environmental analysis for leasable mineral projects would be conducted during Plan implementation at the project level. The Forest Service and BLM conduct the environmental analysis for each leasable mineral project and would make two independent decisions before any project can be approved.

Comment: The Plan should clarify that robust analysis of environmental impacts will be performed at the project and forest-level. Mineral and energy projects would require plan-level amendments.

Response: The EIS analysis estimates the acres of potential ground disturbance for leasable mineral exploration and development for each alternative. The EIS recognizes the potential

impacts of mineral exploration and development on resources and the environment at a sufficient level for a programmatic Forest Plan. As a result of the environmental analysis, there are Plan Standards to avoid or minimize potential impacts, such as the Standard for Federal Leasable Minerals (MIN-S-01, 02, 03). Guidelines and management approaches in the Minerals and Energy section of the Forest Plan address the Forest Service's relationship with the BLM and NC Geological Survey.

All alternatives including the No Action Alternative (Alternative A) include direction for federal leasable minerals, which are part of ecosystem services and multiple uses of the national forests. The action alternatives (Alternatives B-E) provide updated direction regarding these potential resource-intensive uses. The 2012 Planning Rule provides direction for the plan amendment process, should that be necessary during plan implementation.

Comment: It's unclear whether energy and mineral exploration and development would be compatible with other competing multiple uses such as recreation, providing ecological integrity, and climate resiliency.

Response: The national forests were established by Congress to provide multiples uses for the public including wilderness, timber, developed recreation sites, commercial outfitter-guides, commercial cell tower and communications sites, and commercial energy and mineral projects. Congress established mineral leasing laws so federal lands, including national forests, could supply energy and minerals and provide royalties to the federal treasury and states. The Nantahala and Pisgah NFs has the potential to accommodate multiple uses across the 1.1 million acres, including critical mineral development.

The Forest Plan and the EIS describe the distinctive roles and contributions that Nantahala and Pisgah NFs play in providing a unique geologic source of critical minerals. The EIS estimates exploration and development of minerals would impact fewer than 1/5 of 1% of the forest acres. Mineral development would be intensive on a relatively small acreage, and the acres would be reclaimed to ensure ecological integrity and climate resiliency. In addition to the natural (geologic) limitation on potential commercial mineral deposits which are scarce, the Forest Service has the authority to deny consent for proposed projects, and to require reclamation to mitigate impacts. In addition, environmental regulation on FS lands is often more stringent than on private lands, which leads to greater preservation of ecological integrity, ecosystem services, and climate resiliency.

Historic mining occurred in many locations on lands that are now part of the Nantahala and Pisgah NFs. The ecological integrity and climate resiliency of the Nantahala and Pisgah NFs demonstrates that some degree of mining can be accommodated while the forests continue to provide ecological integrity and climate resiliency.

Comment: The Plan does not provide limits or guidance on meeting 21st century mineral demands through leasable mineral development.

Response: Commercial mineral deposits, especially critical mineral deposits, are rare. The EIS estimates exploration and development of minerals would impact fewer than 1/5 of 1% of the forest acreage. In addition to this natural geologic limitation on potential mineral deposits, the

Forest Service has authority to deny consent for proposed projects, to limit the number or areas of proposed projects, and to require reclamation (MIN-S-01,02, 03).

Comment: Industrial-scale mining on these Forests would be counter to achieving ecosystem integrity. The draft Plan and DEIS do not address if these public lands, or surrounding private lands, would best serve mineral exploration demands.

Response: The Forest Plan as well as the Federal laws and regulations provide the enforcement framework to achieve the desired conditions and meet the Planning Rule's requirement to maintain ecological integrity and sustainability in the Plan area. The national forests were established by Congress to provide multiples uses for the public including wilderness, timber, developed recreation sites, commercial outfitter-guides, commercial cell tower and communications sites, and commercial energy and mineral projects. Congress established mineral leasing laws so federal lands, including national forests, could supply energy and minerals and provide royalties to the federal treasury and states.

While surface resources like timber can be provided on both public and private lands, subsurface resources like commercially valuable mineral deposits occur in finite locations dictated by geology. Chapter 3 of the EIS describes the unique potential for critical minerals on the Nantahala and Pisgah NFs and its distinctive role and potential contribution.

Comment: Commenters requested Plan language ban mining, fracking, oil, gas, and pipeline development on the Nantahala and Pisgah NFs, citing the potential adverse impacts on water and air resources, and climate change. In addition, adverse impacts of existing oil, gas, and mineral leases on the forests should be mitigated.

Response: Chapter 2 of the EIS includes consideration of a passive management only alternative which would not allow for mining, fracking, oil, gas, and pipeline development on the forests. This alternative was not considered in detail because it does not meet law, regulation, or policy requirements to provide for multiple uses (National Forest Management Act of 1976 and the Multiple-Use Sustained Yield Act of 1960). By law, mineral leasing, pipeline construction, and other energy development projects are prohibited in designated Wilderness.

As stated both in the plan and EIS, the Forest Service is not making an availability decision regarding oil and gas leasing in the Forest Plan decision. There are currently no oil and gas leases on the Nantahala and Pisgah NFs. There is one existing hardrock lease on the Nantahala NF but no mining activity has occurred on the lease.

Comment: The draft Plan does not adequately accommodate the NPNF's federal mineral estate, nor account for potential future mineral development, particularly for critical minerals and associated economic development. If the Plan does not make a decision regarding oil and gas availability, a future Plan amendment would be necessary for oil, gas, and/or mineral exploration to occur on the NPNF. Without a Plan amendment, the Forest Service would have to deny consent to any Expressions of Interest (EOI).

The discussion of the Bureau of Land Management's (BLM) status as a cooperating agency is inadequate. The Plan does not adequately analyze mineralogy on the NPNF to indicate what minerals are found on the forests, and how they could contribute to recreational use and mineral development. This lack of

analysis would make the proposed Forest Plan inadequate to reference for any mineral development NEPA. The Plan should note that mineral development will be addressed in the future. The Plan does not adequately address expedited approval of energy projects on the NPNF.

Response: The Minerals and Energy section of the Forest Plan includes information about the federal leasable minerals on the Forests and includes an explanation of the BLM's role as a cooperating agency in the management of mineral resources. A detailed discussion of the current conditions of the forest was discussed in the Forest Plan Assessment, minerals section, which is summarized in the EIS, Chapter 3. The decision regarding oil and gas availability is outside the scope of the forest plan revision and will be revisited at the time that a request for leasing is made.

The final plan Minerals and Energy section includes management approaches regarding the timely review of requests for consent by BLM.

Comment: The Distinctive Roles and Contributions section in Chapter 1 of the Forest Plan should reference the mineral resources and the rich mining history/heritage of the region which supported the early development of our country and provided minerals for industry and the fighting of two world wars.

Response: Text was added to the Distinctive Roles and Contributions section of the Plan to recognize the unique geology of the forest and the history of mining and recreational mineral collecting.

Comment: Commenters requested the agency identify areas for mineral collection, and how collecting in these areas differs from mineral collection in the general forest.

The Plan and EIS should consider "casual use" for surface penetrating/digging tools in several sections, using similar language to BLM guidance for Surface Management of the Bureau's lands. The agency needs to define 'mechanized equipment' and 'ground penetrating tools', and outline the difference between human-powered tools in the final EIS. Commenters requested clarification of terms, and that digging in stream banks be prohibited, with the exception of hand tools such as trowels or shovels. Define "digging tools" as tools that are human-powered.

Response: The forest plan includes an objective in the recreation section to identify areas where surface-penetrating tools can be used for non-commercial mineral collection within three years of plan approval. A management approach has been added to this objective to involve collaboration with mineral collecting groups in the identification of these areas and the clarification of appropriate tools that would be allowed.

Comment: Please consider adding considerations for coordination with mineral and lapidary groups, which reflect another aspect of multiple use management.

Please consider expanding the number of sites for visitors seeking opportunities for non-commercial mineral collection from just the Ray Mine area. Several others are listed in the DEIS, including Buck Creek, the Walker Creek Kyanite Prospect, etc.

Response: We have added language to a Management Approach in the Recreation Settings section to provide for collaboration with mineral and rock collecting groups, volunteer or

partner organizations, and/or state or local governments with an interest in minerals and geology.

While the EIS references areas that are common for rock collecting and minerals enthusiasts, the consideration of designated sites for non-commercial mineral collection will be done during the 3 -year process of identifying designated mineral collection areas.

Comment: Minerals and Energy standard 2, regarding reclamation, should be edited to remove reference to ‘staged reclamation’ as that term generally applies to strip mining activities.

Response: MIN-S-02 has been updated to be responsive to comments.

Comment: Please consider rewriting MIN-DC-02 to read: "Opportunities are provided for minerals and energy production in an environmentally sound manner to meet current and future needs. Requests that could lead to economic development will be addressed in a timely manner.

Response: The desired condition has been updated and a management approach was added to emphasize responsiveness in a timely manner.

Comment: Commenters requested additions to the Plan’s list of references for Minerals and Energy.

Response: Additional references were included in the Minerals and Energy section of the EIS.

- Forest Service and Bureau of Land Management have a framework for sustainable development of mineral resources (Forest Service and Bureau of Land Management, 2003). This framework balances environmental, social, and economic aspects, environmental stewardship, and stakeholder participation.
- Forest Service and Bureau of Land Management, 2003, Sustainable Development - Mineral Application, USDA FS and USDOI BLM

Comment: The Minerals and Energy desired conditions should be reordered so the emphasis is first on renewable energy sources before mining.

Response: Desired conditions are not ordered by priority and both renewable and nonrenewable sources of energy are considered multiple uses of the Forests.

Comment: The Forest Service should include an objective that addresses use of renewable energy in agency facilities.

Response: The Facilities section of the Forest Plan includes a standard that would require consideration of renewable energy for new or renovated facilities: “Sustainability concepts will be incorporated in new facility construction and facility renovation projects to the greatest practical level.” Management approaches in the Facilities section of the Plan include recommended strategies to utilize sustainable design and renewable energy resources.

Comment: Commenters concerned that increasing the acreage with management restrictions on the NPNF is contrary to Executive Order 13817 and the June 4, 2019 federal report “A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals” (U.S. Dept. of Commerce June 2019). Commenter requests an inventory and assessment of critical mineral resources on National Forests prior to or during the revision of Land Resource Management Plans. The June 4, 2019 Report directs all

Federal agencies to incorporate direction on critical minerals in land management plans to prevent disruptions to the supply chains for critical minerals.

Response: The Forest Assessment, Plan and EIS each consider federal leasable minerals and renewable energy in the Minerals and Energy sections. Critical minerals are discussed in the EIS, Chapter 3. Between draft and final, to provide for consistency with recent Executive Orders, a desired condition in the Plan was modified to reflect critical minerals: “Opportunities are provided for minerals and energy production in an environmentally sound manner to meet current and future needs, including critical minerals for renewable energy technology and climate change mitigation infrastructure,” (MIN-DC-02). A management approach was also added to the plan that “When the Forests receive a BLM request for consent to a BLM authorization for critical minerals, the Forest Service gives the request priority consideration, including due diligence in conducting an environmental analysis in cooperation with BLM in order to make a consent decision in a timely manner.”

Comment: Would designating additional wilderness prevent mineral exploration on said lands?

Response: The effect of recommending wilderness on mineral exploration is described in the EIS.

Comment: The NCGS offers sharing their agency data and archives with the FS, including a digital set of materials on mine locations, mineral resources, and locations where recreational mineral collection could be done safely.

Response: Thank you for this information. The Forest looks forward to coordinating with the N.C. Geological Survey. The Minerals and Energy section of the forest plan includes a guideline to coordinate with the N.C. Geological Survey.

Comment: The DEIS does not evaluate the economic viability of mineral extraction on the Forest.

Response: The Economics section of the EIS associates one job annually with mineral activities on the Nantahala and Pisgah NFs, under all alternatives. Mineral material supports forest and regional infrastructure (for example, aggregate replacement for roads, rip rap and other materials for flood repairs) and for local and/or regional economic development (aggregate and construction materials for residential, commercial, and public works projects, for example). Therefore, the mineral program contributes jobs, income, and raw materials to the local and national economy under all alternatives.

Potential energy and non-energy minerals, including leasable hardrock materials, are discussed in the Minerals and Energy section of the EIS. Economic impacts, in terms of jobs and income, of mineral potential are not estimated in this document because there are not any currently foreseeable activities to be analyzed under any alternative.

Comment: There should be no development of wind energy projects on parts of the forests, including designated Wilderness.

Response: Energy production is a multiple use on National Forest System lands. The Energy Policy Act of 2005 recognizes the Forest Service’s role in meeting the renewable energy goals of the United States. Consistent with agency policies and procedures, the use and occupancy of

NFS lands for alternative energy production, such as wind energy development, are appropriate and can help meet the energy needs of the United States. A Desired Condition in the Plan's Climate Change section provides examples of renewable energy options that will be considered, including biomass, firewood, hydropower, geothermal, wind, and solar.

If a wind project is proposed in the future, site-specific environmental analysis will be completed prior to project approval. The Minerals and Energy section of the EIS explains that the revised plan would reduce the acres available to consider for renewable energy projects compared to the current plan. Energy production and siting will be considered consistent with management area desired conditions, and therefore wind energy projects would not be compatible with designated wilderness. In management areas where a large-scale renewable energy project is compatible with the general area desired conditions, prior to any activity, a NEPA analysis must consider forestwide and management area resource standards, such as those for scenery, wildlife, botany, cultural resources, recreation, or old growth, to evaluate the feasibility of an individual project.

CONSERVATION EDUCATION

Comment: Commenters support education on the forests, noting that it promotes the public's understanding of natural systems, conservation, stewardship, and the next generation of environmental stewards. They expressed support of various Conservation Education Plan components, some encouraging more efforts to address forest management projects, promote the principles of sustainable timber harvest and ecological restoration wildlife habitat including demonstration areas, cultural heritage, and the history of the Cherokee and other tribal nations. A comment also suggested supporting conservation education objectives through partnerships.

Response: A new management approach was added to the Conservation Education stating educational materials addressing project objectives such as promoting the principles of sustainable timber harvest, wildlife habitat improvement, and ecological restoration, as examples, are provided to the public in coordination with project design and implementation. Standards exist in the Terrestrial Ecosystems section that supports timber management for demonstration purposes and demonstration areas exist at the Cradle of Forestry historic site and Bent Creek Experimental Forest. Working with partners is included and has been clarified in the management approaches for conservation education.

Additionally, a management approach in the Conservation Education section was augmented to now state subject matter pertaining to tribes is collaboratively developed and, in appropriate cases, is also in tribal language. Opportunities to share tribal history and connections to the forest will be incorporated into education efforts when desired by tribes.

Comment: Commenters expressed an interest in having additional interpretive signage at recreation sites, in the vicinity of ongoing or recent timber management projects, and at the Cradle of Forestry to inform the public about forest management practices, to provide natural resources educational

materials and to decrease impacts. Commenters also recommend greater use of the Cradle of Forestry to demonstrate innovative silviculture and wildlife habitat benefits to the public.

Response: A management approach was added to include interpretive materials for forest management activities such as timber harvest, wildlife habitat improvement, and ecological restoration. Working with interested partners, signage will be developed and posted to educate the public about project goals, management approaches and other needed messaging. There is a desired condition that states conservation education and interpretation efforts emphasize a land ethic that informs how to reduce impacts on ecosystems and supports the Forests' efforts to protect.

Plan standards in the Terrestrial Ecosystems section support timber management for demonstration purposes. Demonstration areas exist at the Cradle of Forestry historic site and Bent Creek Experimental Forest.

Comment: Commenters request increasing interpretive education, outreach, and engagement of all participant groups including Tribes, schools, and citizen science programs; along with increased funding and staff.

Response: A management approach in the Conservation Education section was updated to address tribal history interpretive education. A new desired condition was added stating conservation education and interpretation is culturally inclusive, engages diverse audiences and invites diverse visitors to the Forest. A management approach was augmented, reading: To expand capacity to deliver conservation education, build working relationships with other Federal and state agencies with a conservation mission; public, private schools, and universities; and non-profit organizations; and maintain memberships with professional resource management and educational associations. Manage the conservation education and interpretive services programs to avoid duplication with other providers whether in public or private sector. Another edit to the Management Approaches includes: Build relationships with community programs that help ensure the delivery of public services reflects the diversity of the American public. When promoting conservation education, encourage participation by urban and rural communities, tribes, youth, minority, and low-income populations. Also, this Management Approach: Expand educational programs to reach more youth. For example, in classrooms and at sites across the Forests, ensure that programs provide youth of all ages and backgrounds meaningful educational experiences of the highest quality; and this new Management Approach: Partner in the delivery of programs on natural resource management for the USDA Job Corps Centers in North Carolina.

Comment: Commenters request additional signage that emphasizes "leave no trace" principles and dog leash regulations.

Response: The Conservation Education section includes a Desired Condition stating low impact recreation principles, such as "leave no trace" and "tread lightly," are promoted and widely used by the public. A management approach was augmented calling to provide information kiosks that include messaging needed for the area while minimizing visual clutter by concentrating

messages and eliminating the need for multiple signs. Kiosks will be utilized to educate visitors about nearby projects.

COMMUNITY CONNECTIONS

Comment: Commenters expressed support and appreciation of the plan's emphasis on connecting people to the land and working with and expanding capacity through a variety of stakeholders including state and Federal governments, local governments, Chambers of Commerce, partner organizations, and non-profit interest groups. Commenters would like to see additional cooperation and engagement with county governments, partner organizations, NCWRC, and NCNHP at the local level during plan implementation and monitoring.

Response: The final plan includes a key theme of Partnering with Others to achieve shared goals stating "The U.S. Forest Service collaborates with partners to enhance its mission to sustain the National Forests in North Carolina. Forest managers work with other Federal, state and local governments, tribes, and partners across boundaries to achieve shared objectives. Working collaboratively allows us to accomplish more work on the ground than any one agency could do alone." Not all public, government and partner involvement can be addressed at the plan level given the strategic nature of a plan to provide direction across 1 million acres. Therefore, the Public Involvement section of the plan includes a guideline that states: In order to encourage meaningful public participation during preparation of integrated landscape projects, the Forest Service should facilitate collaboration among state and local governments and tribes and participation of interested persons, except where emergency situations warrant an expedited time frame." Additionally, desired conditions in the Public Involvement section calls for continued collaboration throughout the life of the plan. There is a management approach that states: "Encourage the formation of broadly-based user groups to assist, communicate, and support forest resources activities. Work with interested individuals and user groups to promote responsible, safe, and sustainable public use practices and to help the Forest Service communicate with the public and interested organizations." Forest personnel participate in the scheduled activities and meetings of partner groups where possible. In the Community Connections section of the plan, government involvement is emphasized, as shown by the following objective: "Every year host a discussion at the supervisor's office with interested WNC local governments or their economic development offices to foster shared actions that support local jobs, attract tourism, and encourage coordination on public health and safety issues.

Comment: Commenters support various Community Connections plan components, though some encourage it be more inclusive of, with special outreach to, people who have lived in the planning area for generations to respect the local traditional cultures.

Response: A desired condition within the Community Connections section was modified to state: Diversity of visitors, volunteers, and partners continues to grow through existing and new relationships; and citizen involvement becomes more representative of local community and the nation's demographics and interests. Beyond that desired condition, Partnering with Others is a

key theme of the revised forest plan. The Community Connections section of the plan identifies a desired condition that the Forests contribute to the region by "maintaining local cultures and traditions, connecting people to the land, and contributing to a greater quality of life." The plan clarifies an intent to continue to engage with local residents and communities during project development and implementation. For example, the Public Involvement section includes a desired condition that states: Community participation and citizen involvement is common and integral to project design and implementation, resulting in stronger, more successful outcomes. Additionally, each part of the Forest has a geographic area chapter that identifies ways people connect to the land and the local goals for the area. These are a few examples that show how the plan addresses the value of local communities.

Comment: Commenters would like to see an objective that addresses systemic discrimination in agency hiring practices and additional agency collaboration with local groups addressing issues of equity and inclusion. Promoting diversity should be an agency priority and requirement for engagement with partners.

Response: The Plan's Community Connections section reflects the desire of the Forest to work with all people and communities we serve. This section has been modified to ensure the desired conditions and management approaches reflect the intent of expanding the diversity of forest visitors, volunteers, and partners, and increase public land employment pathways across all demographics. Additionally, the Conservation Education and Interpretation section addresses engaging diverse audiences, inviting diverse visitors to the forest and ensuring the delivery of public services reflects the diversity of the American public. Addressing hiring practices of the U.S. Forest Service is outside the scope of the Nantahala and Pisgah Forest Plan.

Comment: Commenters request a new guideline addressing stakeholders' engagement on completed and proposed projects.

Response: The Public Involvement section includes desired conditions and guidelines that address collaboration with partners in the design and implementation of projects. Additionally, a Management Approach within the Integrated Ecosystem and Wildlife Habitat section focuses on culturing partnerships and collaborative groups to identify, guide, and implement restoration projects. For many Tier 2 objectives, relationships with partners currently exist, and partners are currently engaged in monitoring collection or data interpretation, while other Tier 2 objectives would not be possible without additional resources or capacity. Additionally, partners will be involved in the development of the monitoring guide which will be instrumental in monitoring the progress of plan implementation, including the how successful projects are at moving towards desired conditions.

Comment: Commenters recommend interpretation of management underway and an adjustment to measuring the forests' volunteer and service program.

Response: A Management Approach in the Conservation Education section was edited to address interpretation of ongoing forest management. An Objective was updated to address comments regarding measuring the effectiveness of the forests' volunteer and service program.

Comment: The NCWRC is supportive of tiered objectives in the Plan and would like plan language that focuses on strengthening the communication and coordination between the USFS and the North Carolina Wildlife Resources.

We recommend clarifying the distinction between Tier 1 and 2 objectives for wildlife openings, as both Tier 1 and 2 depend on resources outside of USFS. For example, the Tier 1 objective for permanent grass/forb areas is 3,750 acres. The vast majority of the USFS' current capacity to maintain permanent openings is due to work completed by NCWRC through cooperative agreement.

Response: Management approaches in Wildlife and Recreation sections of the plan acknowledge the support that NCWRC and other partners provide in maintaining wildlife habitat such as grass, forb and shrub openings. The Forest Service appreciates the relationships that we have with state agencies and will continue to work with the NCWRC to maintain permanent wildlife openings.

PUBLIC INVOLVEMENT

Comment: Several commenters expressed concern about the amount of public involvement and engagement during implementation of the plan and project planning.

- Members of the hiking community should be consulted before timber harvesting projects are approved to consider how they will impact the nearby trails.
- Question about whether revised NEPA regulations will allow for scoping and public involvement on projects.
- There will be added benefit and value in pursuing and accepting input and/or feedback when there are plans to implement prescribed fire, timber management, direct impacts to aquatic and terrestrial wildlife resources, and modifications to the road and trail system, especially when it overlaps interest of government agencies, general public, and multiple user groups.

Response: Public involvement will continue to be a part of the NEPA process for projects on the forest and all members of the public and organizations are invited to engage in the public participation process. The Plan includes desired conditions and a guideline to encourage meaningful public participation during project planning.

Comment: The Forest Service should do additional public engagement after projects are implemented to consider lessons learned and whether the project was successful at achieving its objectives.

Response: The Plan's Community Connections section states that the Forests will continue collaborative efforts in the future to implement projects and monitor the plan, and, where needed, to adjust adaptively. That section includes management approaches for working with interested individuals and user groups in resource management activities. As part of plan implementation, a biennial monitoring report will reflect whether the plan is meeting the desired conditions or where modifications are needed.

Comment: Chapter 1 of the Forest Plan should include a more robust description of the collaborative groups that were engaged in the plan revision process. This will aid other National Forests engaging in

plan revision and their understanding of the collaborative efforts on the Nantahala Pisgah National Forest.

Response: The engagement of the collaborative groups, including the Stakeholders Forum, is more fully described in EIS Appendix H. The language referenced in this comment has been edited and augmented to address the concerns: Two very active collaborative groups met almost monthly from the assessment stage throughout plan development and providing input at each stage of plan development: the Nantahala-Pisgah Forest Partnership and the Fish and Wildlife Conservation Council. To better understand zones of agreement among collaborators and around critical plan issues, the Forest Service sought the assistance of the National Forest Foundation (NFF), a congressionally chartered non-profit partner. NFF supported a formal collaborative process known as the Stakeholders Forum for the Nantahala and Pisgah Forests plan revision which brought interested members from both earlier collaboratives and others together regularly during the plan development phase.

The collaborative groups invested countless hours to identify and nurture membership and build trust and understanding of perceived conflicting interests. They reviewed drafts of plan components and offered solutions to address all interests. They created unique approaches and processes to maximize their effectiveness as groups. Their input to the Forest Service was detailed, innovative, and helped to create a more fully implementable plan. The Forest Service participated in their processes offering the agency perspective and sideboards when appropriate.

Comment: The forest plan does not include enough transparency about implementation of the plan.

Response: The forest plan does not make site specific decisions for implementing actions on the ground. Additional NEPA analysis and associated public involvement will occur prior to implementing actions on the ground.

Comment: The Forests should commit to implementing several Stewardship Contracts and Agreements over the next planning cycle, including working with local governments and state agencies. Stewardship contracting is recommended as a good way to allow for project-level flexibility while also facilitating a shift toward priority treatments over time. A new management approach should be added to describe the use of stewardship contracts and agreements to support the pursuit of restoration opportunities across watersheds and between projects over time.

Response: Inclusion of local governments in management processes is referenced throughout the Public Involvement and Community Connections sections of the plan. The Public Involvement section includes a desired condition that states: Community participation and citizen involvement is common and integral to project design and implementation, resulting in stronger, more successful outcomes. A desired condition in the Public Involvement section states: Community participation and collaboration create a shared vision that results in shared-stewardship, integrated approaches, and aligned actions for the Forests, partners, and volunteers.

The forest plan includes a management approach to utilize tools such as the Good Neighbor Authority, to partner with the North Carolina Wildlife Resources Commission, the North Carolina Forest Service, and other organizations and partners to increase restoration capacity. Part of this includes the use of stewardship agreements with partners to increase restoration-based habitat management projects.

Comment: The agency has deprived me from participating fully in the LRMP revision according to the intentions of the NFMA. For more than five years during the ongoing revision of the LRMP, the FS has disregarded their duty to share information in an open and honest way without secrets. Neither has the USFS assisted and cooperated with Plaintiff in protecting the Chattooga River's resources.

Response: The Forest Service has taken every opportunity to make sure that everyone has had a fair and equitable opportunity to engage in the plan revision process including numerous public meetings, comment periods. Thousands of individuals, both local to Western NC and from across the country, have participated in meetings and submitted comments throughout the plan revision process. The Forest Service has met all of its legal obligations with regards to managing wild and scenic rivers, including the Chattooga River.

ECONOMICS AND SOCIAL ENVIRONMENT

Comment: What prevents supplementing the over-extended law enforcement presence on the forest with local deputies in areas needing more coverage? The local culture and economy of Clay County could certainly use the support referenced in the Forest Plan and there are an abundance of opportunities for doing that here.

Response: Law Enforcement and Investigation (LE&I) is managed separately from the National Forest System management branch of the U.S. Forest Service, therefore this suggestion is beyond the scope of the plan revision process. There are other many in which the plan supports local economies. The Community Connections section of the plan includes the following desired condition: The Forests contribute to economic vitality of the region by providing benefits, maintaining local cultures and traditions, connecting people to the land, and contributing to a greater quality of life.

Comment: To meet the needs of local forest products businesses, like timber harvesters, sawmills and manufacturers, we support an increase in ecologically-sound timber practices that support both our local economies and healthy forest habitats. Projects should be developed and dispersed across the Forest equitably with the tasks of sustaining local & regional economic development successes, addressing current local economic development needs, identifying and growing local & regional economic development opportunities (recreation in underutilized areas), and identifying & monitoring the health of environmental assets (clean & abundant water).

An effective forestry management program not only benefits practically all species that inhabit our forests, but implementation of a long-term program also builds an economic engine that provides much needed employment opportunity for the impoverished communities that have been left behind in Appalachia.

Response: The purpose of the Forest Plan is to have an integrated set of direction to provide for social, economic, and ecological sustainability and multiple uses of the Forest's lands and resources. The Community Connections section of the Plan states: The Forests contribute to local quality of life, creating opportunities for sustainable economic development through tourism, recreation, and timber harvest among other multiple uses and benefits.

The Forest Plan also includes an objective to meet with WNC local governments or their economic development offices to foster shared actions that support local jobs, attract tourism, and encourage coordination on public health and safety issues. Additionally, recreation activities across the Forests contribute to the sustainability of the social and economic values of the local communities through jobs and income in the local economy, community stability or growth, and the quality of lifestyles in the area (REC-DC- 11). Each Geographic Area considers the economic drivers for each area and social, economic and cultural sustainability are addressed in the monitoring program.

Comment: We recommend the Forest Service regularly monitor and assess publicly available government, user group, and industry data in order to assess the Return on Investment (ROI) of Forest Service resources for various activities and stewardship efforts across the Forest. This includes, but is not limited to, the economic impact of various active uses of these lands (recreation, timber), the costs of mitigation afforded by CO2 utilization and clean and abundant water (climate), WNC outdoor and climate industry clusters (Collider/Outdoor Gear Builders), and the benefits that access to the Forest is lending to local and regional social determinants of health.

Response: The EIS addresses the economic contribution of forest management on the regional economy and the changing impact across alternatives (Chapter 3, Social and Economic Resources section). A complete economic contribution analysis is not commonly done for annual monitoring reports; however, monitoring resource uses will contribute to an understanding of how forest management may be impacting the surrounding economy. For example, changes in FS expenditures, timber harvested, and recreation visitors will have impacts on the regional economy. Estimating costs or values of clean water and CO2 mitigation are outside the scope of monitoring.

Comment: The Forest Service should continue to remain in contact with collaborative partners and stakeholders in recreation, forest products, conservation, healthcare, tourism, economic development and local governments, to retain access to economic contributions data as it is commissioned and compiled by these various organizations.

Response: The Maples and Bradley studies are discussed in the EIS. The Social and Economic Resource section has been updated to include and reference the additional economic contribution studies mentioned (Duda, 2015; American Horse Council, 2018).

Comment: The economic impact from recreation, climate industry cluster and climate change mitigation, wildlife hunting & observation, wilderness, and clean and abundant water should be considered. Each of these activities is creating a positive net effect on the economy across the region. State level and comparative data lends broad insight into the scale of these activities.

Statistics show that there are 300,000 to 400,000 licensed hunters across the entire state of North Carolina and they generate about \$400 million in annual revenue. Tourism has a much greater impact on the economy.

Response: The value of recreational visitors to wilderness and historic places, horseback riding, hunting and fishing on Nantahala and Pisgah NFs is contained within the economic impact estimate of all recreation visitors reported in the Economics section of the EIS. The National Visitor Use Monitoring survey does not allow for statistically reliable estimates of these visitor groups individually. The economic impact of visitors to wilderness areas within the Nantahala and Pisgah NFs is included in the EIS, Social and Economic Resources section. In addition, the amenities provided by wilderness are discussed in the affected environment of the Social and Economic Resource section.

The socioeconomic analysis uses data from the National Visitor use Monitoring Survey (NVUM), which includes diverse activities enjoyed on the National Forest, including hunting. The survey does not allow for estimation of economic impact by activity.

Comment: This Partnership recommends that all interest groups work with public and private sector partners to perform research within three years of Plan finalization to measure and understand how public lands use across various interest groups and stakeholders is generating value, impacting the regional economy and the return on investment that is being produced via the Forest.

Response: Jobs and labor income supported by Nantahala and Pisgah forest management is reported in the environmental consequences of the Social and Economic Resources section. Estimates of Value Added, rather than output, as a measure has been added to the EIS analysis. Output as a measure double counts economic impacts since it includes intermediate purchases. Value Added is equivalent to GDP and is a more meaningful measure. The methodology for the economic impact analysis is included in Appendix B.

Comment: The forest plan does not address significant concerns such as the downstream economies of forest products. The USFS and USDA has a significant role to play in improving how local economies benefit from forests. I had hoped the forest plan would address opportunities and goals for improving the total economic benefit of the forest on local economies.

Current mill owners cannot continue to make investments in their facilities without a predictable and economical supply of forest products. Likewise, future investors will not be interested in the purchase of such facilities without the assurance that a long-term, economical supply of raw materials is available in the immediate market area.

Response: The purpose of the Forest Plan is to have an integrated set of direction to provide for social, economic, and ecological sustainability and multiple uses of the Forest's lands and resources. The Community Connections section of the Plan states: The Forests contribute to local quality of life, creating opportunities for sustainable economic development through tourism, recreation, and timber harvest among other multiple uses and benefits.

The Forest Plan also includes an objective to meet with WNC local governments or their economic development offices to foster shared actions that support local jobs, attract tourism, and encourage coordination on public health and safety issues. Additionally, recreation

activities across the Forests contribute to the sustainability of the social and economic values of the local communities through jobs and income in the local economy, community stability or growth, and the quality of lifestyles in the area (REC-DC- 11). Each Geographic Area considers the economic drivers for each area and social, economic, and cultural sustainability are addressed in the monitoring program.

Comment: The costs of the proposed restoration/timber program activities are not disclosed in the DEIS. There are no estimates of costs per acre of any of the proposed treatments -- prescribed fire, silvicultural practices, regeneration practices, intermediate stand improvements, invasive species control.

Response: The purpose of the forest plan is to guide future project and activity decision making. This programmatic EIS analysis describes effects over a large geographic and/or time horizon, the depth and detail reflects the major broad and general impacts that might result from a programmatic decision. It would be highly speculative to estimate the cost of treatment activities as specific locations, timing, and conditions associated with implementation are unknown at this time. The Council on Environmental Quality has indicated that programmatic effects analysis must provide sufficient detail to foster informed decision-making that reflects broad environmental consequences from a wide-ranging Federal program. Additional detail such as quantifying per acre costs of treatments costs would not provide a meaningful analysis of effects of the revised plan alternatives. NEPA analysis associated with specific future projects implemented under the land management plan may provide more detail based on site and project-specific needs and conditions.

In addition, forest plans do not make budget decisions. Budgets are allocated from Congressional action. Should Congress emphasize specific programs by appropriation, a redistribution of priorities would follow, regardless of the alternative implemented. In all management activities, the Forest would still be required to either be making progress toward, or not be precluding achievement of the desired conditions. Reduced budgets or changed priorities may change the speed at which this occurs but does not change our obligation to meeting them.

Comment: Can the forest plan include supporting local economies with visiting hunters years after the saws have left an area?

Response: The economic impact analysis estimates the contribution to the local economy due to the spending of visitors to the National Forest. This data is from the National Visitor Use Monitoring Survey (NVUM). While hunters are included in this dataset, the survey methods do not allow for estimating the contribution of hunters separately from other visitor activities.

Comment: The Forest Service should continue to maintain and improve frequently visited sites as a top priority through locally coordinated efforts. Visitors to the national forests provide a tremendous boost to local economies and opportunities for forest enjoyment among residents and visitors.

Response: The economic impact analysis estimates the contribution to the local economy due to the spending of visitors to the National Forest. This data is from the National Visitor Use Monitoring Survey (NVUM). The economic contribution of the spending of local and non-local,

day and overnight visitors to the national forest is captured in the estimates of jobs and labor income reported in the socioeconomic section. The Developed Recreation section of the Forest Plan includes desired conditions to maintain priority developed sites to national quality standards (REC-DC-17) and to maintain forest system roads and trails at highly developed sites (REC-DC-19).

The socioeconomic section also addresses the social importance of the national forests to local communities.

Comment: We appreciate the recognition of the value of the Blue Ridge Parkway in your proposed plan. To update some of your information, a new National Park Service report shows last year nearly 15 million visitors to the Parkway spent \$1.1 billion in nearby communities. These visitors supported 16,341 jobs in the local area, causing a cumulative benefit of \$1.4 billion to the local economies. A good portion of these benefits accrued to areas adjacent to the Nantahala and Pisgah NFs.

Response: The economic analysis uses the National Visitor use Monitoring Survey (NVUM) data, which would include visitors who came to the National Forest via the Blue Ridge Parkway. The FEIS has been updated to include the results of the FY2018 NVUM survey. This data and analysis is reported in the socioeconomic section.

Comment: The EIS should include a comparison of money generated by ecotourism side by side with the money generated from timber harvest.

Tourism, outfitters, and spin-off spending on lodging, food, outdoor equipment, and retail purchases provide steady income to forest communities. The Outdoor Alliance estimates 4.6 million visitors generate \$83.3 million in spending a year in western North Carolina.

Response: Local economies are a consideration in Forest Service land management as reflected in the plan Community Connections, Public Involvement and EIS Appendices G and H. The Social and Economic Resource section of the EIS includes an estimation of jobs and labor income contributed to the local economy from all program areas, including recreation and timber.

Comment: When the Forest Service describes the trend of reduced private land available for timber harvest and hunting by the public it must acknowledge that the trend results in an increased demand of both those resources from the NF.

Response: The impact of activities on private lands is addressed in many resources sections including Recreation, Social and Economic, water, and timber. The Forest Plan includes a discussion of the Forests' Distinctive Roles and Contributions in Chapter 1. This section places the national forests in the context of surrounding lands and plan components throughout the plan emphasize the need to coordinate with local communities and governments on shared resources.

GEOGRAPHIC AREAS

Comment: In the Black Mountains GA, BLM-GLS-03, the Partnership recommends adding reference to the development of old growth age and structural characteristics, including a mosaic of different sized openings to mimic tree-fall natural gap disturbance.

Response: This goal was not edited. It was intentionally written to include opportunities for younger age class structure in a GA that otherwise has a lot of existing Old Growth patches.

Comment: In the Black Mountains GA, BLM- GLS-06, the Partnership supports the recognition of the need for increased recreational activity in the area, and would like to see this goal more inclusive of other recreational activities. Notes could be made of the multi-use trail plan in development in the Old Fort area.

Response: The goal has been updated to read, "Respond to increased demand for access by a growing public interest in mountain biking and rock climbing, hunting, fishing, and other recreation opportunities."

Comment: In the Black Mountains GA, "Partner with Mt. Mitchell State Park to ensure recreation linkages & high-quality conservation education opportunities"; the Partnership recommends adding the following to the end: "and access for trail management and parking."

Response: As written, ensuring recreation linkages is inclusive of access and trail management and parking.

Comment: PL-GLS-03 - "Maintain and restore Southern Appalachian bog habitats within geographic area..." should be applied to all Geographic Areas that contain Southern Appalachian bogs.

Response: Per additional internal review, the bog goal was removed from all Geographic Areas, since no single GA is more important compared to another and we do not currently have a comprehensive restoration survey of all bogs on the Nantahala and Pisgah. A forestwide restoration objective in the final Plan's Plant and Animal Diversity section addresses restoring and/or maintaining Southern Appalachian bogs by reducing woody plant encroachment.

Comment: In the Eastern Escarpment GA, we recommend that the USFS address the extreme overcrowding in the Wilson Creek gorge, and that controlling access, at least seasonally, be considered to protect riparian and aquatic habitats.

Response: While we recognize the high recreation use in the Wilson Creek gorge the Forest Plan does not make travel management decisions. Actions to manage use and access in the area would be considered through a project level analysis.

Comment: In the Eastern Escarpment GA, the Partnership recommends adding reference to, "horseback riding in the Boone Fork complex."

Response: This language has been added to the Eastern Escarpment description.

Comment: We would like to point out that there are not overnight accommodations for users in the Boone Fork area, adding overnight accommodations in this area would help to make Eastern Escarpment more accessible to those traveling longer distances. We recommend adding the following: "and partner with user groups to create overnight accommodations, to help disperse recreation use from more concentrated areas."

Response: The addition of a campground is a project level decision. The campground was closed due to lack of use and unsustainable revenue/funding. Additionally, there is a private horse camp in the immediate vicinity of Boone Fork.

Additionally, the plan includes the following management approach for Developed Recreation: Development of new infrastructure is not likely, and unsustainable sites may be closed in the future. All decisions are based upon collaborative evaluation of the critical success factors of sustainable recreation: shared vision, financially sustainable, visitor satisfaction, natural and cultural resource protection, and ability to manage effectively. Some sites may be reconfigured or altered to retain or improve visitor experiences while being financially sustainable.

Comment: In the Eastern Escarpment GA, the Partnership recommends the addition of language that recognizes collaborative efforts to increase multi-use trails in the Eastern Escarpment Geographic Area.

Response: The language referencing collaborative efforts to increase multi-use trails was added to EE-GLS-14.

Comment: The Eastern Escarpment should recognize ongoing work by partners and include a goal to maintain and enhance recreational opportunities and to improve monitoring and inventory.

Response: Working with partners is included in the goal statements under the heading 'Partnering with Others'.

Comment: Referencing EE-GLS-12, planners should consider whether this guidance can be adapted and applied to other Wilderness areas or WSAs in NPNF.

Response: We recognize that Linville Gorge is not the only wilderness where different uses and interests exist. Thus, a similar Geographic Area goal to EE-GLS-12 has been added to the following GAs where Wilderness, Recommended Wilderness, and Wilderness Study Areas exist: Black Mountains, North Slope, Highland Domes, Nantahala Mountains, and Unicoi Mountains. This will guide partnerships with wilderness and outdoor recreation groups to assist in managing wilderness values and educating visitors about wilderness ethics and low impact recreation.

Comment: In the Bald Mountains GA, there is an error in this section, the Mountains-to-Sea Trail does not go through the Bald Mountains.

Response: The final plan has been updated to remove reference to the Mountains-to-Sea Trail in the Bald Mountains GA.

Comment: For consistency and clarity, we recommend the same wording from BLM-GLS-01 be used for other Geographic Areas where spruce-fir restoration and conservation is appropriate.

Response: The background for the Bald Mountains Geographic Area states that the northeastern portion of the area has spruce-fir and northern hardwood habitats that could be enhanced to provide high quality habitat for the Carolina Northern Flying Squirrel. A companion goal has been added for the Bald Mountains GA to add emphasis on spruce-fir restoration for the species, consistent with the Black Mountains goal. The Pisgah Ledge GA has a goal calling for expansion of spruce restoration. A goal for the North Slope GA has been updated to emphasize spruce-fir restoration for the squirrel, and to be consistent with the Black Mountains goal mentioned by the commenter. The Great Balsam GA has a goal regarding the restoration of spruce-fir forests. The suggested additional language has been added to emphasize spruce-fir

restoration for the squirrel. Ultimately, restoration for flying squirrels will be prioritized where it's important.

Comment: In the Bald Mountains GA, BAM-GLS-02 change "Max Patch" to "Snowbird Mountain", which is the southernmost high elevation open area in this Geographic Area.

Response: This goal is specific to maintaining grassy balds. No change was made.

Comment: In the Pisgah Ledge GA, consider adding something similar to GB-GLS-06, which references the enhancement of young forest growth.

Response: The following language has been added to the Pisgah Ledge Geographic Area's goals: "Enhance structural conditions for ruffed grouse, deer, and turkey by providing more young forest."

Comment: In the Pisgah Ledge GA, consider adding something similar to GB-GLS-10 or HD-GLS-18, to support native brook trout.

Response: One of the goals for the Pisgah Ledge GA is "Sustain and improve aquatic habitat to benefit vertebrate and invertebrate species in Davidson and Mills River drainages as well as headwaters of French Broad. Management actions will focus on key species, including native brook trout and hellbenders." This goal will support native brook trout. As for the suggestion to incorporate something similar to HD-GLS-18 in the draft plan "Continue to work with local and regional chambers of commerce," we did not incorporate it into the Pisgah Ledge goals, as Chambers of Commerce are not a resource management partner.

Comment: Modify PL-GLS-02 to include hunting emphasis, worded similarly to NM-GLS-03.

Response: The Pisgah Ledge Geographic Area goal was updated to emphasize hunting opportunities. It now states, "Reduce the abundance of white pine in the North Mills River and Davidson River watersheds while enhancing oak regeneration and hunting opportunities."

Comment: We recommend that each GA re-words the Goal to this language already in the plan: "Continue to support conservation and protection of peregrine falcons through monitoring, seasonal closure of select rock faces, and collaboration with the climbing and recreation community."

Response: The suggested GA goal language has been incorporated into the final Plan for the following Geographic Areas: Eastern Escarpment, Pisgah Ledge, Highland Domes.

Comment: In the Pisgah Ledge GA, the Partnership recommends that PL-GLS-12 be adopted as a Forestwide Standard: "Utilizing visitor education and collaboration with multiple user groups, improve interactions between users to enhance visitor experience and safety."

Response: The Conservation Education section of the forest plan includes desired conditions and objectives for providing interpretation and conservation education opportunities.

Comment: The Partnership recommends that PL-GLS-16 be adopted as a Forestwide Standard: "Work with recreation groups to maintain the integrity and resiliency of rare plant communities and species through site specific management, stewardship, and education."

Response: This is more appropriately included in the plan as a goal.

Comment: In the Pisgah Ledge GA, PL-GLS-10, add Tennent Mtn and the section of the art Loeb trail that is located in this area. Also, add a goal to ensure that scenic quality is sustained.

Response: Goals are intended to place emphasis on specific areas within the GA and intentionally do not name all popular sites and trails. The forest plan addresses scenic quality consistent with the MA allocation in the area.

Comment: In the Great Balsam GA, the Partnership recommends changing the language in GB-GLS-01 from "Conserve and improve high elevation red oak forests, northern hardwood forests, and spruce-fir forests" to the following: "Conserve and restore high elevation red oak forests, mesic oak, and spruce-fir forests with emphasis on desired conditions within these ecozones."

Response: This goal has been updated to include mesic oak forests.

Comment: In the Great Balsam GA, GB-GLS-04 - "Red spruce bog preservation in Alarka Laurel and Roy Taylor." We request more information or a better explanation of the objectives be provided for this goal.

Response: The goal has been updated to read, "Restore or maintain the red spruce bogs in Alarka Laurel and Roy Taylor areas to ensure a red spruce and sphagnum moss component is present."

Comment: In the Great Balsam GA, GB-GLS-22 reads as incomplete: "Trail and hiking associations and groups.

Response: The goal has been separated from GB-GLS-22 and updated to read, "Partner with trail conservation and maintenance groups, hiking associations, and hiking clubs."

Comment: Highland Domes GA should mention maintaining and enhancing recreation in Panthertown Valley while noting the need to reduce user-created trails.

Response: The following goal has been added to the Highland Domes GA, "Work with recreation groups to maintain and enhance recreation opportunities in the Panthertown Valley while also reducing user-created trails."

Comment: In the North Slope GA, the Partnership recommends changing NS-GLS-01 by adding reference to the natural range of variability.

Response: The forest plan recognizes NRV as an important tool in defining desired conditions and references NRV throughout the plan, but no change is being made to this goal.

Comment: In the Nantahala Mountains GA, the Partnership recommends adding, "including active management and natural disturbance" to NM-GLS-01.

Response: 'Active management and natural disturbance' are already within the range of management approaches implied in this goal. No change to the goal was made.

Comment: In the Fontana Lake GA, there should be more emphasis on maintenance and an increase of trails, improved signage (including the Trail of Tears), maintenance of current infrastructure, and designation of both lakes and Cheoah River as recreation priority areas. Recommended Objectives

would include increasing flow releases on the Cheoah River and providing horse camping options at Tsali.

Response: The current FERC relicensing settlement agreement specifies the number of releases per month and additional releases would require a change in the relicensing settlement agreement with FERC. The number of releases was determined based on mimicking historical flood regimes necessary for the health and productivity of the endangered species found in the river; recreational boating is a secondary benefit and not the driving force behind the number or timing of the releases.

Comment: In the Hiawasee GA, HW-GLS-06, the text references BMPs for acid-forming rock deposits. I recommend that the Plan clarify the source of those BMPs, since the North Carolina Forestry BMPs were not developed to mitigate or address acidic water deposition from this type of geology.

Response: NC State BMPs include guidance for mitigating impacts associated with acid-forming rock deposits. No changes to the goal are needed.

MANAGEMENT AREAS

Comment: Several comments provided specific recommendations for areas of the forest that should be allocated to a specific management area while other commenters provided general support for one management area over another.

Response: Alternatives were developed to be responsive to the diversity of opinions regarding management area allocations across the forest. While most plan components are consistent among all action alternatives, management area allocations vary among alternatives to be responsive to public comments. Maps were a key point of focus at several public meetings during alternative development and information provided by the public and collaborative groups was used to inform management area lines in the range of alternatives.

Comment: Commenters request that management areas such as Roan Mountain and the Appalachian Trail Corridor MA have management direction that is consistent with adjacent national forests.

Response: Management area direction of adjacent national forests (Jefferson NF in VA, Sumter NF in SC, Chattahoochee-Oconee NF in GA, and Cherokee NF in TN) was reviewed and consistency was sought where appropriate to facilitate management across national forest boundaries.

Comment: Many commenters expressed concern for the protection of national forests and recommended that more areas be protected as national recreation areas, national scenic areas, wilderness, special/ecological interest areas, or part of the old-growth network. There were requests that timber harvest be eliminated as a treatment option in these designated areas.

Response: The EIS considered a range of alternatives that responds to the issue of lands allocated to designated areas and the amount of land. Alternatives consider a range of management in Recommended Wilderness (ranging from about 15,000 in the current plan up to 123,000 acres in the action alternatives); Special Interest Areas (from 40,000 in the current plan to 111,000 acres in the action alternatives), Ecological Interest Areas (from 0 acres in the current plan to about 80,000 acres in the action alternatives); Wild and Scenic Rivers (from 10 currently

eligible rivers to 19 analyzed in the action alternatives); Appalachian National Scenic Trail Corridor (from 16,000 acres in the current plan to 52,000 acres in the action alternatives); Heritage Corridors (from 0 acres in the current plan to 23,000 acres in the action alternatives), Scenic Corridors, from 0 acres in the current plan to 23,000 acres in the action alternatives), and the Designated Old Growth Network (from 211,000 acres in the current plan up to 265,000 acres in the action alternatives). Existing special areas from the current plan for Roan Mountain, the Cradle of Forestry in America, three Experimental Forests and two Research Natural Areas were retained in all action alternatives. Additionally, the action alternatives include a new management area (Interface), specifically focused on recreation and access. Each of these management areas or designations will be managed by plan direction that guides management consistent with the values of each area.

While many management areas such as wilderness, recommended wilderness, and special interest areas include more restrictions on active management such as timber harvest, all national forest lands are managed to protect natural resources and plan direction provides protection for water quality, soils, rare species and habitats and recreational values.

For more information about how the FS responded to comments about wilderness, see the “Recommended Wilderness and Designated Wilderness” section of this document.

The recommendation of a national scenic area or national recreation area was considered but not in detail. See Chapter 2 of the EIS for more information.

Comment: Commenters requested that all NHNAs be placed in a management area that is unsuitable for timber production and that no management actions should occur in Natural Heritage Areas except to restore, enhance, preserve, or protect the ecological and heritage qualities for which the areas were recognized. Other commenters requested that only the highest quality NHNAs (High, Very High, and Exceptional) be removed from the suitable base. Comments requested that boundaries of NHNAs be verified in the field before treatments were proposed and that this be done in coordination with the Natural Heritage Program.

Commenters were pleased to see coordination with the NC Natural Heritage Program included as an objective and recommended that coordination with the state should occur early and often during project development.

Response: Coordination with the NC Natural Heritage Program is an integral part of project development and analysis.

The relationship between NHNAs and suitability for timber production varies across the forest based on the management area that they are contained within. In management areas other than the Matrix and Interface, NHNAs would be considered not suitable for timber production per that management area direction. During plan revision, the NHNAs designated as exceptional by the NC Natural Heritage Program were reviewed and allocated to Special Interest Areas (SIA) where appropriate. NHNAs that fall within the Matrix and Interface MAs would be subject to forestwide direction. The Forest Plan includes a desired condition (PAD-DC-05) and guideline (PAD-G-02) to coordinate with the State Natural Heritage Program during projects regarding management options for NHNAs. This plan direction will ensure collaboration with the State

Agency and decision making that is both responsive to multiple use management and cognizant of key biological values present.

State established Natural Area boundaries will be considered during site specific project level planning through cooperation with the NC Natural Heritage Program.

Comment: Commenters expressed support for the Ecological Interest Area MA as a MA framework that provides a compromise between management flexibility and road building. Several commenters provided recommendations for specific areas being allocated to this MA because of their relatively unroaded characteristics and high ecological integrity.

Response: The EIS analyzes a range of alternatives to address management area allocations for places of high public interest. Alternative C includes the highest amount of NFS lands allocated to the Ecological Interest Area MA.

Comment: Commenters expressed opposition to the Ecological Interest Area MA citing that the protections that are sought through EIAs can be achieved through Special Interest Area classification and that the establishment of EIAs will result in further reducing habitat for wildlife.

Response: The EIS analyzes a range of alternatives to address management area allocations for places of high public interest. Alternative B is responsive to comments that desire more flexibility of management and does not include any areas allocated to the Ecological Interest Area MA.

Comment: There is a need for clarification on what timber management is allowed in the Ecological Interest Areas MA.

Response: The Final Forest Plan separates the plan direction for the Ecological Interest Area MA from the Special Interest Area MA. Lands in the Ecological Interest Area MA are identified as unsuitable for timber production; however, timber harvest is allowed as long as it does not result in departure from the desired community composition. Ecological Interest Area management approaches include types of timber treatments that could be expected to occur in the management area, including thinning, group selection and harvest to accelerate development of old growth characteristics.

Comment: The draft plan places the Bartram Trail in the Interface Management Area but perhaps the NC Bartram National Recreational Trail is incompatible with timber management since it negatively impacts the trail management and hiker experiences. Maybe it would be better fitted to an ecological managed areas?

Response: Unlike National Scenic or Historic Trails, the Plan does not identify a separate management area for National Recreation Trails. Instead, they are included in Interface Management Area along with other concentrated recreation use sites and corridors, such as campgrounds and Forest Scenic Byways. Vegetation management actions in Interface will be for forest health and restoration, wildlife habitat improvement, or to benefit the recreation experience, and will be designed to meet scenery desired conditions and standards. Recreation use areas with national or regional significance are inventoried as Scenic Class 1 or 2, and have an assigned desired Scenic Integrity Objective of High or Moderate in Interface, which dictates

minimal deviation from the desired scenic (landscape) character. Additionally, the following forest wide scenery desired condition applies to all nationally significant recreation corridors. "SC-DC-09 Management activities visible in the Foreground (FG) or Middleground (MG) from the Appalachian National Scenic Trail, National Historic Trails, National Recreation Trails, Blue Ridge Parkway, or National Scenic Byways meet or exceed a Moderate Scenic Integrity Objective, regardless of Scenic Class or management area in which the activity is proposed." This Plan direction for scenery emphasizes the importance of protecting scenic quality of the Bartram National Recreation Trail to a degree comparable with the Appalachian National Scenic Trail or the Blue Ridge Parkway.

Comment: Request removing the words "new lands" and "acquired" from Roan Mountain standard 08. The new statement would read: RM-S-08 No new motorized access will be permitted on lands above 4000 feet except to provide access to private inholdings, for administrative use, or emergencies.

Response: The intent of the standard is to allow no additional motorized access on areas that are acquired in the Roan Mountain MA and is consistent with the recommendation in the comment. The standard was left unchanged.

Comment: The objectives for grassy and shrub balds in the Roan Mountain MA should be updated to reflect current conditions and should clarify the distinction between what management activities constitute "maintaining" grassy balds (this could be defined geographically on a map and/or with a list of activities) vs. the "creating" grassy balds.

Response: The Roan Mountain objectives have been updated. The objectives are to maintain and restore grassy balds where they historically occurred, as opposed to creating new grassy balds.

Comment: Recommendation to work with partners to develop a visitor use plan for Roan Mountain as part of RM-O-04.

Response: The objective has been updated to include language regarding working with partners on a visitor use plan (Final Plan RM-O-03).

Comment: Commenters recommend that RM-S-04, regarding climbing in the Roan Mountain MA, be site specific or resource specific.

Response: To protect unique habitats and rare species concerns at Roan Mountain, the Forest Service must limit climbing at Roan Mountain. Climbing in sensitive areas on Roan Mountain is restricted through a Forest Supervisor's closure order.

Comment: Commenters requested that no changes be made to the designation of existing administrative and congressionally designated areas in the plan revision with emphasis added to areas designated "Inventoried Roadless". Commenters reference the DEIS Reader's Guide which states that administratively and congressionally designated areas would remain unchanged in the revised forest plan.

Response: The statement in the Reader's Guide was intended to mean that there would be no changes to areas that are currently designated either congressionally (Wilderness, Wilderness

Study Areas, Wild and Scenic Rivers, and Cradle of Forestry in America) or administratively through executive order (Inventoried Roadless Areas). However, the 2012 planning rule includes a required process for inventorying and evaluating lands that may be suitable for potential inclusion in the National Wilderness Preservation System. The EIS includes a range of alternatives that include wilderness recommendations, from as little as 11,120 acres in Alternative C to 126,333 acres in Alternative B. While the Forest Plan makes recommendations for congressional designations, the act of congressional designation is outside the scope of plan revision.

Comment: Inventoried Roadless Areas must have plan components that provide for Roadless Characteristics and not solely rest on the language and interpretations of the Roadless Rule for project implementation.

Response: Some plan components in the Backcountry Management Area explicitly apply to Inventoried Roadless Areas. The revised plan incorporates IRA direction into the Plan itself.

MATRIX MANAGEMENT AREA

Comment: Commenters recommend that Backcountry designations which are outside of Inventoried Roadless Areas and conflict with the NC Wildlife Resources Commission's Wildlife Habitat Active Management Areas (WHAMAs) should be designated as Matrix.

Response: The EIS considers a range of alternatives that respond to public comments regarding management area allocations across the forest. Compared to the other alternatives, Alternative B includes the largest acreage of Matrix management area.

Comment: Commenters expressed opposition to the allocation of lands to the Matrix MA and felt that many areas classified as Matrix are unsuitable for timber operations and should not be placed in Matrix MA.

Response: The EIS includes a range of alternatives that address the amount of lands allocated to different management areas including Matrix. While many individuals expressed concern about the acreage that is allocated to Matrix MA and therefore suitable for timber production, not all lands within the Matrix MA would have timber harvest during the life of the Forest Plan. Management area plan components, including objectives do not prescribe what will happen on every acre within the management area, but rather identify the management framework and opportunities for management that can be considered.

BACKCOUNTRY MANAGEMENT AREA

Comment: Scenic character desired conditions for Backcountry do not clearly relate to the described desired scenic integrity objectives or desired ROS settings and should be deleted.

Response: The desired scenic character was corrected in the final Plan.

Comment: Commenters would like to see an emphasis placed on the elimination of unneeded roads in the Backcountry MA.

Response: The forest plan includes an objective to complete a Transportation Analysis within three years of plan approval. This process will identify opportunities for decommissioning roads

including within the Backcountry MA. The plan also includes an objective to obliterate unauthorized roads and trails in priority watersheds and IRAs and an objective to decommission 10% of roads within Backcountry MA over the life of the plan.

Comment: The standard (BAC-S-09) should succinctly state that system roads may not be constructed or reconstructed in the Backcountry Management Area.

Response: The language regarding road construction in the Backcountry MA is consistent with regulations for Inventoried Roadless Areas.

Comment: We agree with the use of converting decommissioned roads to linear habitats (BAC-S-05), but recommend that options that allow for conversion to open areas, native grass/forb strips, pollinator strips, or early successional forest also be included in the standard.

Response: The Backcountry management area contains large blocks of remote and unroaded forest primarily shaped by natural processes, except where active management is utilized to restore ecosystem composition, structure, function, and to provide resiliency against insects and disease. To perpetuate Backcountry conditions, no new permanent opening would be constructed, however, existing openings will continue to be maintained using native grass/forbs, and pollinator species as appropriate.

Comment: Commenters expressed support for the Backcountry MA and identified specific areas that should be allocated to this MA because of their relatively unroaded characteristics and primitive setting.

Many commenters recommended that all areas that were included in the inventory and evaluation for wilderness that were not recommended for wilderness be included in the Backcountry MA.

Response: The EIS analyzes a range of alternatives to address management area allocations. Alternative C includes the greatest amount of Backcountry compared to the other alternatives and is responsive to public comments that would like to see more of the Nantahala and Pisgah NFs allocated to Backcountry management.

APPALACHIAN NATIONAL SCENIC TRAIL CORRIDOR MANAGEMENT AREA

Comment: The Appalachian Trail MA has greatly expanded and we do not see any supporting evidence that the expansion is necessary. The FS has accomplished small but ecologically significant high elevation restoration under the existing plan through timber sales not visible from the AT and outside of the current MA but now in the new AT MA. Restoration and habitat improvement for wildlife species is needed along the AT corridor, particularly in high elevation ecozones. AT-S-03 is a very important standard that should remain as written.

Response: Under the 1986 Forest Plan direction, the ANST corridor is managed as the visible foreground up to 0.5 miles from the trail or associated features. This situation created confusion because much of that foreground zone fell within management areas which were part of the suitable timber base, even though commercial timber production is inconsistent with management of the ANST foreground. The revised Plan updates the mapped corridor to be consistent with adjacent forests and regional guidance. Vegetation management can occur within the corridor as long as it maintains or enhances the ANST environment or user

experience (AT-S-02). Potentially visible foreground was mapped using a bare ground terrain model in GIS, whereas actual visibility will be done during project-level analysis with consideration of vegetative screening. AT-S-03 was removed from the final plan; however, AT-S-02 still allows for vegetation management for a variety of purposes including improving habitat.

As for forest composition and structure in the ANST corridor, many of the ridges it follows are in inventoried old growth and it's not uncommon to see large white oaks and other mast producing tree species along the trail. Younger age class stands are more commonly associated with management areas which are actively managed with commercial timber harvest.

Comment: AT-S-01 should be removed so that timber harvest is allowed within the portion of the area that is not visible from the Appalachian Trail. Removing the exemption for active management that cannot be seen from the AT is not warranted and will be detrimental to wildlife management.

Response: Timber production is inconsistent with ANST management, therefore AT-S-01 remains in the final Plan. However, timber harvest and other types of vegetation management will be allowed in the ANST MA under certain conditions. AT-S-02 allows for vegetation management activities including maintaining, restoring, or expanding habitat for rare communities, species dependent on disturbance, or wildlife viewing opportunities.

Comment: AT-S-02 should include a bullet point to allow management for wildlife species in the AT corridor.

Response: The list of allowed vegetation management activities includes, "Maintaining, restoring, or expanding habitat for rare communities, species dependent on disturbance, or wildlife viewing opportunities."

Comment: AT-S-02 - should clearly state that "vegetation management actions must be consistent with Primitive or Semi-Primitive Non-Motorized ROS setting characteristics," while allowing for limited inconsistencies such as maintaining select balds.

Response: Desired ROS classifications have been mapped and added to the final Plan, along with direction that all proposed actions must be consistent with the corresponding desired ROS setting.

Comment: AT-S-06, regarding hauling or skidding with the AT Corridor MA, the standard should be edited to prohibit such activities if they interfere with the ANST.

Response: The standard has been revised to limit hauling or skidding in locations within the management area which are not visible from the trail.

Comment: Roads should not be constructed within the ANST Management Area unless consistent with the nature and purposes of the ANST. Possibly, this guideline could describe that, "Roads should not be constructed within the ANST Management Area, unless allowed by a valid existing right. The purpose of this guideline is to protect the nature and purposes of the ANST by avoiding the construction of roads."

Response: This guideline was moved to a standard (Final Plan AT-S-05); Authorize new roads within the ANST corridor management area only if entering the management area is the only

feasible and prudent location and the road is not visible from the ANST footpath or associated features

Comment: Multiple comments were made regarding AT-S-02 to clarify the intent and purposes of vegetation management within the AT Corridor MA.

Commenters noted that AT-S-03 (Draft Plan) was inconsistent with AT-S-02 and should be deleted to reduce confusion regarding vegetation management.

Response: This standard was updated to be consistent with adjacent forests plan direction for management within the AT Corridor MA. Following conversations with the Appalachian Trail Club and National Park staff, an additional bullet was added to include vegetation management for the purposes of ‘ecological restoration or managing for resiliency in the face of change’.

AT-S-03 from the Draft Plan was removed in the Final Plan.

Comment: Several comments were received regarding the desired conditions for the Appalachian Trail MA and recommendations were made to update the text to improve readability, more consistently align with the definition for desired conditions, and to be more consistent with forest plans of neighboring forests that manage within the Appalachian Trail corridor.

Response: The Forest Service coordinated with staff at the Appalachian Trail Conservancy and the National Park Service to update plan components. Several desired conditions, standards, and guidelines in the Appalachian Trail MA were revised to improve clarity and to be consistent with adjacent national forests’ plan direction, where appropriate.

Comment: Commenters note that with the loss of available forest to wilderness designations, outfitter and guides should be permitted to use the AT within the Nantahala and Pisgah NFs with a group size of 15. The group size limit on the AT seems overly restrictive and prevents meaningful expedition routes that can utilize both the Bartram Trail and AT together.

Response: An outfitter and guide permit group size of 10 people avoids confusion in locations where the ANST passes through designated wilderness with the same group size limit. This limit is also supported by the ATC, therefore it will remain at 10 people including guides.

Comment: The NPNF ANST Management Area should be in Management Area Group 3 or 4, as opposed to Group 2 as described in the DEIS. Groups 3 and 4 more accurately reflect the National Trails System Act for National Scenic Trails and desired Primitive and Semi-Primitive Non-Motorized ROS settings.

Response: ANST Plan components were revised with input from ATC and NPS. Revised components are consistent with adjacent NF Plans for road and vegetation management. Vegetation management is allowed within the AT MA to enhance the ANST environment or user experience.

Comment: The Draft Plan and most DEIS alternatives may not protect Roadless Area Characteristics along the ANST segments that intersect Bald Mountain (Alternatives C & D), Cheoah Bald (Alternatives B, C, and D), and Wesser Bald (Alternatives C and D) Roadless Areas, since the proposed ANST plan components do not clearly protect Primitive and Semi-Primitive Non-Motorized settings along these segments of the ANST corridor.

Response: A standard was added to the ANST Management Area which states: "Management of Inventoried Roadless Areas (IRA) within the ANST Management Area shall conform to IRA management direction in Forestwide Plan Components and Backcountry Management Area, in addition to ANST Management Area direction. Where ANST Management Area direction differs from IRA direction for roads or vegetation management, the more restrictive applies." (AT-S-16)

Comment: The proposed action and alternatives do not provide necessary protections for the ANST corridor when associated with the Coweeta Experimental Forest Management Area. The ANST MA should extend one-half mile into and overlay the Experimental Forest MA. Management actions would then be constrained by the most restrictive management direction of the two MAs. At minimum, the Experimental Forest MA should have a standard that roads may not be constructed within one-half mile of the ANST travel route.

Response: A standard and a management approach were added to the Experimental Forest MA to clarify that the management in the Coweeta Experimental Forest must conform to Appalachian National Scenic Trail management area direction within the visible foreground up to 1/2 mile from the footpath, vistas, and other associated features.

Comment: The proposed action and alternatives provide limited protection for the ANST corridor when associated with the Roan Mountain Management Area. The ANST and Roan Mountain MAs should overlap where the most restrictive direction controls. At a minimum, the Roan Mountain MA should have a standard that roads may not be constructed within one-half mile of the ANST travel route.

Response: A standard was added to the Roan Mountain MA in the Final Plan (RM-S-01) which reads: "Management of lands within the ANST and OMVNHT foreground (up to 1/2 mile) shall be consistent with direction found in the respective ANST and NHT management areas. Where management direction differs, the more restrictive direction applies."

Comment: The DEIS does not address the ANST affected environment including describing the status of providing for the nature and purposes qualities and values of this National Scenic Trail. For example, basic information is omitted such as, What is the length of the ANST travel route on the NPNF? How many acres are included in the ANST Management Area by alternative? How are the mountain balds currently being managed along the ANST? How many miles of road are within the MA?

The affected environment should describe that the NPNF does not have any range or pasture permits making the forest not amenable to offering rural pastoral scenic character landscapes.

Response: The FEIS has been updated to include additional information about the ANST corridor MA.

Rural pastoral and cultural/historic landscapes with pastoral character do exist on the Forest, and are maintained with mowing by force account, partnership, and contract.

Comment: A Supplemental DEIS must address the ANST affected environment following processes described in Chapter IV part E of these comments. For example, the maps that are displayed in Appendix D may depict that many sections of the ANST are not currently being protected by either a Primitive or SPNM ROS setting allocation. National Forest System lands are normally managed for Naturally Evolving and Natural-Appearing landscapes.

Response: Desired ROS settings are identified in the final Plan for each management area, and a ROS map has been included in the project record.

Comment: The proposed action should be modified or an alternative developed where the ANST MA corridor extends to one-half mile on each side of the ANST route with revised plan components.

Response: The ANST corridor is mapped as the visible foreground up to 1/2 mile on each side of the footpath and associated features based on a GIS bare ground visibility analysis using a DEM generated from the latest generation LiDAR. This was done in coordination with the ATC.

Comment: Where the Appalachian Trail passes through Backcountry MA, Backcountry MA direction should be applied as it is the more restrictive MA.

Response: A standard has been added to the final plan in response to this comment (AT-S-16).

NATIONAL SCENIC BYWAYS

Comment: We understand that some of the Byways like the Mountain Waters Scenic Byway were designed to interpret Forest Management where appropriate and compatible with activities. We recommend adding a bullet on SB-S-01 for "xii Enhance Forest Restoration".

Response: All Forest Scenic Byways, like Mountain waters Scenic Byway, are in the Interface management area, which is suitable for timber production or harvest and subject to forestwide plan direction.

Regarding vegetation management activities that are allowed in the National Scenic Byways management area, restoration activities would be covered in item i. "Create aesthetically desired stand structure and species composition, including a mosaic of tree species of various densities and stem sizes, woodland characteristics, and enhancement of fall color species."

WILD AND SCENIC RIVERS

Comment: Comments expressed general support for the draft plan's proposed 19 additional river segments to the Wild and Scenic River network. There is support for designating all of the river segments that have been identified as eligible Wild and Scenic Rivers. Reasons for support include maintaining free-flowing rivers, avoiding the cost of future projects to decommission dams, supporting healthy fisheries, and protecting priority aquatic habitats, rare species, and regional hydrology.

Response: Thank you for supporting wild and scenic rivers, and the additional segments that have been determined as eligible for designation. Designating river segments preserves their free-flowing conditions, water quality, and outstandingly remarkable values. Wild and Scenic designation protects rivers from the harmful effects of water resource projects, and the associated aquatic habitats and rare species that depend on their waters.

Comment: Request that timber production be prohibited in WSR corridors to protect water quality.

Response: Management activities that take place within eligible and suitable wild, scenic, and recreational river corridors would be consistent with maintaining the free-flowing nature of the river as well as protecting the identified outstandingly remarkable values, and water quality of river segments.

Management activities allowed within a Wild and Scenic River corridor vary depending on a segment's classification. Within the corridor of a Wild classified river segment, activities such as new road construction, timber management, or new facility construction would be heavily restricted or prohibited. Within the corridor of a Scenic classified river segment, evidence of past or ongoing management activities, including timber harvest, is acceptable provided the forest appears natural from the riverbank. Within the corridor of a Recreational classified river segment, adjacent lands may be developed for the full range of forestry uses and may show evidence of past and ongoing timber harvest. Under all alternatives, future project design and implementation will consider compatibility of proposed actions and preservation of eligible Wild and Scenic River ORVs for each potential classification in addition to management area direction.

Comment: Commenters requested additional eligibility findings for six streams (North Fork of the French Broad River, Panthertown Creek, Greenland Creek and the East Fork of the Tuckasegee River, East and West Forks of Overflow and nine additional miles of Fires Creek). Commenters provided supporting rationale such as unique scenery and waterfalls, unique geology, high recreation use including whitewater paddling, pristine water quality, and unique biological values including rare wildlife.

Requests were also made to revisit the evaluation of 12 segments recommended by NPNF Partnership and American Whitewater.

Response: To be eligible for designation, a river must be free-flowing and possess one or more outstandingly remarkable values. In order to be assessed as outstandingly remarkable, a river-related value must be a unique, rare or exemplary feature that is significant at a comparative regional or national scale. With additional 2022 review, a segment of North Fork of the French Broad River was found to be eligible, but Panthertown Creek, Greenland Creek, upper Tuckasegee River, and East and West Forks of Overflow were not found to possess ORVs. The unique qualities of these rivers including scenery, water quality, wildlife habitat, and recreation opportunities will continue to be provided for through forestwide management direction that protects natural resources. River evaluations are included in Appendix F of the EIS. Where comments provided new information on individual rivers and river segments, additional consideration was given as to whether ORVs exist on the river. Documentation of ORVs for all rivers evaluated in the plan revision are included in Appendix F and eligible rivers are listed in Chapter 3 of the EIS.

Comment: The Upper Nantahala River is not a comparable river for the North Fork of the French Broad. The Upper Nantahala is roadside for its entire length with significant associated visual impacts, whereas the North Fork flows through a roadless valley with few signs of mankind. The Upper Nantahala is dewatered by upstream hydroelectric dams, and runs less frequently and predictably at flows suitable for paddling than the free-flowing North Fork. These rivers are also 90 miles (2-hour drive) apart, making their relative recreational value quite different for people living in different locations.

Response (Update November 1, 2022): As part of the objection review, the planning team sought to remedy objector concerns by reconsidering potential ORVs of this river. Additional discussions were held with Ranger District personnel, zone biologists, and other resource specialists to review each potential ORV in objector comments. A field visit was conducted with

planners, specialists, and Forest leadership to review North Fork French Broad River. As a result of this review, a 3.2-mile segment of North Fork French Broad River was found to possess a recreational ORV and determined to be eligible.

Comment: The Upper Tuckasegee was included in the Draft Eligibility Report as eligible, but then removed in the DEIS without explanation. We would like that decision to be reconsidered.

The DEIS wrongly dismisses the Upper Tuckasegee from eligibility findings and inappropriately references dangerous conditions at the top of waterfalls as a rationale for ineligibility.

Response (Update November 1, 2022): The original finding of "upper Tuckasegee River" as eligible was an error in segment descriptions. The original intent was to identify the lower segment of Tuckasegee River through Bonas Defeat Gorge as eligible, due to its unique scenic and geologic characteristics. The original evaluation incorrectly used the word "upper" instead of "lower." However, the lower segment of Tuckasegee River was later determined not to be free flowing, which dictated changing the river segment to "not eligible." This segment of river is considered "dewatered" because of water diversion for hydroelectric energy production. In September 2022, as part of the objection review process, potential ORVs on the upper segment of the Tuckasegee River were reconsidered during a site visit by FS personnel which confirmed this river segment has no ORVs and is not eligible.

The reference to dangerous waterfall conditions has been removed from the final evaluation in Appendix F as that is not an appropriate description of recreational ORVs. In the absence of being free flowing and not possessing any ORVs, the upper Tuckasegee was found to not be eligible as a WSR (Appendix F).

Comment: The DEIS wrongly dismisses, Panthertown Creek, and Greenland Creek from eligibility findings. These creeks are surrounded by granitic cliffs and massive domes and have waters that are uniquely accessible, clean, cold, and quiet, and views that are uniquely uninterrupted and wild.

Additionally, the streams of Panthertown Valley are far more tannic than other streams on the Forest which creates rare water quality and scenery. People travel to see the falls and quiet sections of these streams, and are welcomed by the tea colored water of the far north, associated with wetlands and coniferous forests. We feel that the DEIS may have missed just how unique these tannic "blackwater" conditions are in the Southern Appalachians.

Response: Most of the streams within the Highlands/Cashiers area exhibit the tannic waters that we see in Panthertown Valley. Streams within the Highlands/Cashiers area tend to be low gradient streams with intermittent waterfalls or cascades. These streams naturally have a higher abundance of coarse sand substrate and can produce some of the best Brook Trout populations on the Nantahala NF. The tannic waters of Greenland Creek and Panthertown are not unique from other streams within the Highlands/Cashiers area.

The evaluation of the Panthertown Creek and Greenland Creek found no ORVs that are unique, rare, or exemplary features within the region of comparison and therefore were not found to be eligible WSRs (Appendix F).

Comment: The eligibility of Overflow Creek should be upgraded from Scenic to Wild. The Forest Service should reevaluate the East and West Forks of Overflow Creek and recommend these creeks for WSR designation. The East & West Forks of Overflow form the headwaters of Overflow Creek, and are "outstanding resource waters" located in some of the wildest lands in the Chattooga River watershed; and, the East & West Forks of Overflow provide critical habitat for southern brook trout, a species that is in severe decline due to the effects of climate change, the impacts of Hemlock Woolly Adelgid, and outright habitat destruction/degradation.

Response: Overflow Creek was originally evaluated as scenic classification as opposed to wild classification due to evidence of human activity which would preclude the wild classification. Following additional review and evaluation of the river's outstandingly remarkable river-related values, it was determined that the previous determination of a Scenery ORV was incorrect and that there are no unique or outstandingly remarkable river-related values related to scenery, recreation, geology, wildlife or fish, vegetative/ecological, historic, or other similar values on Overflow Creek. While the river does possess scenic qualities, they are not outstandingly remarkable or unique compared to other rivers in the region of comparison. Final evaluation of the river is that it does not meet the requirements to be recommended as an eligible wild and scenic river.

The evaluation of the East and West Forks of Overflow found no ORVs that are unique, rare, or exemplary features within the region of comparison (Appendix F).

Comment: While beyond the scope of the Forest Plan, it's very important that the Nolichucky River finally be designated as a National Wild and Scenic River.

Response: The Nolichucky River has undergone a full suitability study resulting in a recommendation for designation as a Wild and Scenic River. Until a final determination is made regarding suitability or non-suitability, the Forest Service will continue to protect those qualities that make the river eligible; therefore, it will continue to be managed as an eligible Wild and Scenic River until designated by Congress or released from study.

Comment: The eligibility of Whitewater River should be upgraded from Scenic to Wild. Specifically, the section starting just below the private land tract above the Democrat Creek confluence and running to the SC state line should be upgraded to Wild, with the exception of a Scenic corridor around the Highway 281 crossing.

Response: The Whitewater River was evaluated by upper and lower segments. Due to its proximity to the NC281 highway, the original scenic classification for the lower segment is appropriate. A future suitability study could lead to a change in the segment's classification, as it will analyze conditions within a ¼ mile on either side of the river. Refer to Appendix F for additional documentation.

Comment: The eligibility of Thompson River should be upgraded from Scenic/Recreational to Wild/Scenic.

Response: Thompson River is classified as Scenic/Recreational because it is largely undeveloped but is close to development on adjacent private lands and Recreational due to proximity to NC 281. A future suitability study could lead to a change in the segment's classification, as it will

analyze conditions within a ¼ mile on either side of the river. No other unique or outstandingly remarkable river-related values were identified during internal and public review. Refer to Appendix F for additional documentation.

Comment: An additional 6-8 miles of Fires Creek should be included in the eligibility recommendation, at minimum to just below the road crossing near Bristol Fields horse camp. It appears that what was included was the Delayed Harvest Trout Section for its fishing recreational value? However, other values such as solitude, whitewater paddling, outstanding resource waters, and biological diversity of freshwater aquatic species should also be taken into consideration.

Response: The eligible river segment of Fires Creek contains a parallel road as well as a bridge crossing. Additionally, the segment contains development near the river including a parking lot, restrooms, a developed camping area, and picnic area. Following additional internal review, the original eligibility classification for Fires Creek remains valid. Refer to Appendix F for additional discussion of ORVs.

Comment: Big Laurel Creek and the West Fork of the Pigeon should be reclassified as “scenic” rather than “recreational streams” because they are not roadside, and visitors quickly and completely leave road corridors and experience a scenic landscape. This is especially true of the West Fork Pigeon which lacks even a riparian trail.

Response: Upon revisiting the West Fork of the Pigeon River per commenter's request, the evaluation supports the segment's recreational classification, due to the segment's proximity to Hwy 215. The highway provides easy access to the river and several waterfalls. Additional classification adjustments could be considered in a suitability analysis.

Big Laurel Creek was not evaluated but assuming that the commenter means Flat Laurel Creek, this river is classified as Scenic and Recreational.

Comment: Overflow and Whitewater should be classified as Wild because these streams have a wild remote character upon leaving the put in or trailhead. Whitewater River merits a Scenic classification from Silver Run Creek confluence to the private land tract, and a Wild classification starting just below private land tract (approx. 2,000 linear ft. above Democrat Creek confluence) to SC state line.

Response: Overflow Creek was evaluated as scenic due to some evidence of human activity. No unique or outstandingly remarkable river-related values related to recreational, geologic, wildlife or fish, vegetative/ecological, historic or other similar values were identified during internal and public review.

Lower Whitewater River was evaluated as scenic for the entire segment due to its proximity to NC281 highway.

Comment: The Wilson Creek WSR boundary overlaps the Harper Creek WSA, including the important Harper Creek Trail access. Any group size limit policy put in place for the Harper Creek area in the event of Congressional designation would do well to align with any existing policies in overlapping designations. Without that consistency there would be perpetual management confusion. [USFS] advises that in the Wilson Creek Comprehensive River Management Plan, there is indeed a group size limit of 15 affecting outfitters and guides.

Response: If any recommended wilderness(es) identified in the Plan is(are) designated as wilderness by congress at some future date, potential group size limits will be analyzed on a case-by-case basis and implemented through a Plan amendment. The Plan includes a management approach for recommended wilderness which states: “If recommended wildernesses are designated by congress during the life of this Land Management Plan, determine appropriate group size limits by considering area use levels, capacity to maintain opportunities for solitude, and existing group size limits in nearby designated areas. Establishment of area specific group size limits after designation may consider potential benefits of dispersing use from other heavily used wildernesses, or of introducing youth to a wilderness experience through O&G services.”

Comment: We recommend adding a desired condition to restore historical species biodiversity in eligible/suitable river segments.

Response: Designated and eligible Wild and Scenic Rivers are managed to maintain free-flowing status, to maintain ORVs, and maintain or enhance the wild, scenic, and riparian features of the river and to provide water-oriented recreational opportunities in a natural setting. Maintaining and restoring aquatic species diversity is important in all rivers, including designated and eligible wild and scenic rivers. The Aquatic Systems section of the revised Forest Plan addresses this in detail.

Comment: The Draft Plan does not find 12 streams eligible that were recommended by American Whitewater and the 2017 NFPF Recommendation. These streams, grouped intentionally in watershed systems, are: East Fork Tuckasegee (a change from the eligibility report), Panthertown Creek, Greenland Creek, Gragg Prong, Harper Creek, North Harper Creek, Lost Cove Creek, Rock Creek, North Fork of the French Broad River, East and West Fork Overflow Creek, and, Tanassee Creek. All of these streams are in a Management Area that is geared toward passive management, except for the North Fork of the French Broad River and Tanassee Creek, both of which are largely in Matrix.

Response (Update November 1, 2022): As part of the objection review, the planning team sought to remedy objector concerns by reconsidering potential ORVs of North Fork French Broad River and others listed in objector comments. Additional discussions were held with Ranger District personnel, zone biologists, and other resource specialists to review each potential ORV in objector comments. Field visits were conducted with planners, specialists, and Forest leadership to review North Fork French Broad River, upper Tuckasegee River, Panthertown Creek and Greenland Creek. As a result of this review, a 3.2-mile segment was found to possess a recreational ORV and determined to be eligible.

The other rivers listed in this comment were included in the evaluation for eligibility as Wild and Scenic Rivers, Appendix F. While they are free-flowing they were found not possess outstandingly remarkable values that would warrant eligibility as a Wild and Scenic River.

Comments specific to the Chattooga Wild and Scenic River

Comment: The management direction for the Chattooga River does not vary by alternative and was not analyzed in the DEIS, despite scoping requests to do so by American Whitewater and others, including a formal request from the Nantahala Pisgah Stakeholder’s Forum, and despite an Agency monitoring

report indicating significantly changed conditions and containing new and superior scientific information. The DEIS offers no explanation as to why this issue was removed from the scope of the planning process. The Final Plan should reconsider the need for these prohibitions and remove them from the Plan given the factual and public record supporting their elimination, and ongoing harm.

The 2012 Chattooga analysis acknowledged that the predictions and initial assumptions therein were approximate, based on limited data, and that monitoring should lead to updates. The DEIS fails to reconsider Chattooga River management based on new information, therefore the Draft Plan fails to meet the 2012 planning rule which mandates that the responsible official use best available scientific information. Paddling is far lower than what was predicted in the 2012 decision.

Request for changes on management of the Chattooga River include a removal of the seasonal, water flow, and geographic prohibitions on paddling and elimination of the prohibition on paddling the tributaries of the Chattooga River.

Response: The Final EIS includes an alternative considered but not analyzed in detail that responds to the issue of management of the Chattooga Wild and Scenic River. The 2012 decisions for Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor carefully consider and balance multiple uses and effectively minimize conflicts among user groups on the upper segment of the Chattooga. The 2012 decisions include a monitoring plan and adaptive management strategy with the potential to change management based upon monitoring data. All direct and indirect measures to manage recreation use have not been implemented from the 2012 decision. The initial round of monitoring was completed in 2018 and the report on visitor use monitoring on the upper segment of the Chattooga WSR was published in 2019.

While initial monitoring results indicate lower than anticipated boater use on the upper segment of the Chattooga, all direct and indirect measures to address recreational use in the Chattooga River corridor should be completed before adaptive management is utilized to update or change management of paddling limitations. Additional monitoring is needed to establish more robust data sets and trends before direct changes to recreation use are implemented.

In 2014, the U.S. Court of Appeals for the fourth circuit rejected challenges to the 2012 plan amendment decisions and found that the Forest Service's revised plan "carefully balance[s] the wide-ranging interests advocated by the several parties and participants." *American Whitewater v. Tidwell*, 959 F. Supp. 2d 839, 860 (D.S.C. 2013) ("Tidwell"). The Forest Service will continue to implement the 2012 decisions with plan direction for managing the upper segment of the Chattooga WSR. Additional monitoring is necessary to determine use trends and to determine whether changes to visitor use management on the Chattooga River should be appropriately contemplated. Considering changes now, without additional monitoring, would be premature and inappropriate.

Comment: Eliminate the standard that requires all visitors stay on system trails. With the completion of the new river access trails for hikers, anglers, and paddlers, this closure no longer serves a purpose.

Response: In 2019, the Nantahala National Forest completed the construction of three access trails to the Chattooga WSR. These were designed and built to provide sustainable trail locations for recreation users to access the river. The decision to include designated access trails to the Chattooga River was designed to reduce user impacts that were causing erosion and trampling of plants. Management of the Chattooga WSR is coordinated among the Nantahala NF, the Sumter National Forest, and the Chattahoochee-Oconee NF. Any amendments to plan components associated with visitor management of the Chattooga River corridor will occur in coordination with all three National Forests following additional monitoring and assessment of user capacities.

Comment: Private property boundaries, rights, and interests have been disregarded and infringed upon throughout the forest plan analysis and DEIS. The proposal expands public use across private property. The FS is abusing its power in this planning process by expanding the potential list of values to now include activities across non-federal properties. The potential list of values specified under the WSR Act should not be expanded to include ‘activities’, or the plan should limit the application of WSR administration to the current NFS.

The effects analysis has ignored consideration of effects on private property from illegal trespass.

Response: Forest plan direction applies specifically to lands under the management of the Forest Service and does not apply to private property. Plan components specific to designated and eligible wild and scenic rivers pertain to management and activities on National Forest System lands.

In the 2014 court decision for *American Whitewater v. Tidwell*, 770 F.3d 1108 (2014), the appellate court found that the 2012 decisions for Managing Recreation Use on the Upper Segment of the Chattooga River did not cover the portion of the Chattooga River that crosses private property. The court found no harm to private property and found that the Forest Service carefully considered visitor use impacts and potential conflict with balancing legal requirements.

The proposed forest plan is consistent with the 2012 decisions for the Chattooga River and therefore does not interfere with private property rights.

As stated in both the 2012 Decision Notice for Managing Recreation in the Upper Section of the Chattooga WSR and the 2015 Chattooga River Boating Access Decision Notice, boaters may only begin or end at designated put-ins or take-outs on NFS lands. The upper most designated put-in in North Carolina is located downstream of private lands. The 2012 and 2015 decisions and boating permits apply only to National Forest lands and the revised Forest Plan for the Nantahala and Pisgah NFs makes no changes to the language included in those decisions.

Comment: The Chattooga headwaters constitute a legally unique cold-water trout stream that must be managed differently than any other river.

The United States Forest Service owes a non-discretionary statutory duty to provide the highest intensity of protection and enhancement for the in-stream trout habitat and this habitat’s now degraded biological capacity for sustaining outstanding densities, biomass and species assemblage of naturally reproducing trout populations.

The Forest Service has primary responsibility for managing the day to day beneficial uses on those sections flowing through the Nantahala National Forest. The USFS must do so by properly discharging the non-discretionary duty spelled out by the national Wild and Scenic Rivers Act, 16 U.S.C. §1281(a), as further informed and intensified by the antidegradation mandate of the Clean Water Act, 33 U.S.C. §1313(d)(4)(B).

The Forest Service must manage these headwaters by placing “primary emphasis” on “protecting” and “enhancing” the single “scientific feature” which the 1971 Chattooga Study tacitly told Congress was unique to the Chattooga’s headwaters in North Carolina. 16 U.S.C. §1281(a).

Response: Outstandingly Remarkable Values (ORVs) are the exceptional qualities that merit the river’s designation as a wild and scenic river. In many cases, ORVs are defined when the river is designated, often with direct quotations from a WSR study report. However, for some rivers, including the Chattooga, rivers were designated without explicit discussion of their ORVs, so this became a post-designation administrative task to be conducted in accordance with revised interagency guidelines published in the *Federal Register* in 1982 (47 FR 39454).

Per guidance in the Wild and Scenic Rivers Act, the Forest Service is responsible for protecting and enhancing the ORVs, as well as water quality and free-flowing conditions for the Chattooga Wild and Scenic River, not just the upper reaches. The ORVs for the Chattooga WSR includes: Geology and Geomorphologic Values, Biologic values, Scenery and Aesthetic Values, Historical Values, and Recreational Values.

The comprehensive river management plan for the Chattooga WSR is incorporated in the three forest plans that guide management of the Chattooga WSR. Direction in the Nantahala and Pisgah NFs proposed plan revision addresses water quality requirements in the Wild and Scenic Rivers Act through implementation of standards and guidelines that support the protection of water quality and restoration of watersheds. In its August 2018, *A Compendium of Questions and Answers Relating to Wild and Scenic Rivers*, (posted on at <https://www.rivers.gov/documents/q-a.pdf>) the Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC or Council) states:

“While the term “protect” is interpreted by the Council above as “eliminating adverse impacts,” it is not interpreted as an absence of impacts. Rather, each WSR-administering agency must, based on best available scientific information and reasoned professional judgment, ensure that existing values are protected and, to the extent practical, enhanced. The river-administering agency must also establish a positive trajectory for any value that was in a degraded condition on or after the date of the river’s designation.” (page 70) *Non-degradation* within the Act’s context is not synonymous with no impact. Non-degradation in the context of a Wild and Scenic River is assurance that there is no downward trend in conditions that affect ORVs. As stated in the Council’s technical report (Wild and Scenic River Management Responsibilities (March): “To achieve a non-degradation standard, the river administering agency must document baseline resource conditions and monitor changes to these conditions.”

Consistent with the 2012 Planning Rule, the revised forest plan includes a list of priority watersheds which are restoration priorities for the Nantahala and Pisgah NFs. Watersheds in the

Chattooga River drainage have been added to the Priority Watershed list and therefore have a special emphasis for restoration. Watershed restoration action plans will be developed for ten priority watersheds over the life of the plan and will involve engagement with state and private cooperators as well as input from interested organizations and the public.

Comment: Table 16 of the Draft LRMP intentionally omitted ‘biological’ from the list of Outstanding Remarkable Values for which the Chattooga River was designated as a WSR in the 1976 legislation.

Response: This omission of biological as an ORV in the draft plan was an oversight. Biological has been added to Table 16 in the final forest plan as one of the ORVs that make the river suitable as a Wild and Scenic River. The comprehensive river management plan for the Chattooga WSR is included in the forest plans for the three national forests that manage the Chattooga Wild and Scenic River. The 2004 Sumter Revised Forest Plan, 2.A. Chattooga Wild and Scenic River Corridor pages 3-8 to 3-9 describes the Outstandingly Remarkable Values of the Chattooga, including Biology.

Comment: The FS needs to take a leadership role in halting the discharge of sedimentation in the Chattooga River. Your agency has the legal power (and responsibility) to object forcefully to any further land disturbing activities in the upstream watershed that might cause additional sediments to find their way in the Chattooga.

Response: The Forest Service cannot direct management on non-national forest lands. In its August 2018, *A Compendium of Questions and Answers Relating to Wild and Scenic Rivers*, (posted on at <https://www.rivers.gov/documents/q-a.pdf>) the Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC or Council) on page 73 states: “the federal land administering agency must protect WSR values on federal lands”.

Comment: Both the Draft LRMP and the Draft EIS are misleading because they fail to explain the legal duties imposed upon the USFS as a consequence of the Chattooga’s ORW classification or how this classification impacts what the Forest Service must do or must not do in managing the day to day beneficial uses of the Chattooga River. Neither discusses how the antidegradation mandate of the Clean Water Act, at 33 U.S.C. §§ 1313(d)(1), impacts the agency’s management of this river.

Response: 33 U.S.C. §§ 1313(d)(1) gives the State, not the Forest Service, the authority to establish water quality standards including priority ranking, total maximum daily load of pollutants, and maximum daily thermal load. The state of North Carolina is responsible for monitoring water quality and relies on the NC Department of Water Quality assessments to identify impaired waters.

In 1999, the Chattooga watershed was selected to be included in the Large-Scale Watershed Restoration Program by the U.S. Forest Service with the goal to restore watershed conditions on both public and private lands. This followed earlier efforts to reduce sediment in the river. Under the Clean Water Act, if a stream’s water quality is not high enough to meet its designated beneficial uses; it is listed as partially supporting or not supporting based on the presence of certain pollutants. Streams under these two listings are added to the 303(d) list of impaired streams. Numerous projects have been implemented over the years to reduce sediment input to the watershed and the success of these efforts are seen in the 2010 -2020 303(d) listings for the Chattooga River which indicate that the river is not impaired by sediment.

Comment: When an interested individual shares new information demonstrating how water pollution appears to be taking place on these [Chattooga] headwaters, the Forest Service owes a non-discretionary duty to pass on this new information to the state of North Carolina and/or the USEPA so that those agencies might investigate. 16 U.S.C. §1283(c).

Response: Per direction in 16. USC CFR1283 (c) Water pollution, the Forest Service “shall cooperate with the Administrator, Environmental Protection Agency and with the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river”. The Forest Service meets this legal requirement.

The Interagency Wild and Scenic Rivers Coordinating Council notes that the states’ roles in managing congressional designated WSRs includes “*Developing and administering water quality standards.*” (August 2018, *A Compendium of Questions and Answers Relating to Wild and Scenic Rivers*, <https://www.rivers.gov/documents/q-a.pdf>).

Comment: Trout habitat conditions in the Chattooga River continue to worsen, and the FS is neglecting its duty by failing to address the problems of excessive embedded sediment and its impacts on trout spawning and the survival of newly hatched alevin.

Response: The Forest Service acknowledges that suspended sediment can impact trout habitat and the ability of trout to successfully reproduce. Trout distribution has been greatly altered over the decades, by natural and anthropogenic changes. The 2012 planning rule directs the Forest Service to manage for native species and brook trout is the only native salmonid (trout) in North Carolina. The revised forest plan is written to address all trout species, with deference and preference to brook trout when it is applicable. The Forest Service fully recognizes the value of brown and rainbow trout to the angling public, and in some cases, ecosystem function. It is the desire to restore aquatic ecosystem structure and function to the Forests.

Consistent with the 2012 Planning Rule, the forest plan includes a list of priority watersheds which are restoration priorities for the Nantahala and Pisgah NFs. Watersheds in the Chattooga River drainage have been added to the Priority Watershed list and therefore have a special emphasis for restoration. Watershed restoration action plans will be developed for ten priority watersheds over the life of the plan and will involve engagement with state and private cooperators as well as input from interested organizations and the public.

Impacts to trout habitat in the Chattooga River would be addressed in the water restoration action plan and the proposed planning framework provides opportunities for this type of attention and restoration following resource assessment. For more information, see Chapter 2, Watershed Forestwide Plan Components, of the final revised forest plan. In the Management Approaches subsection, the Forests “*would conduct surveys of identified sources of impairment on National Forest land and develop appropriate treatments....*”

Comment: The Draft LRMP mischaracterizes the source of sediment in the Chattooga River. The Draft LRMP broadcasts the following half-true characterization about the source of the sediment plaguing the river: “Some of the stream and river miles are characterized by tannic water and sandy substrates that are unique to western North Carolina.” (Draft LRMP at p.165) This statement summarily implies that the visibly obvious problem of the sediment blanketing the stream bed of the Chattooga

River (not infrequently seen in quantities exceeding one foot in depth) somehow constitutes a natural background condition which is "unique to western North Carolina." Id. Without explicitly stating so, this statement tries to persuade the unknowledgeable member of the public that the blanket of sediment that has impounded on the Chattooga is somehow normal.

Response: The sandy substrate of the Chattooga River was documented as a background condition in the 1971 Study Report which noted "Occasionally along this portion of the river, flood waters have deposited alluvial materials on narrow flood plains."

Sediment has long been one of the pollutants of concern in the Chattooga River. A 1995 study on sedimentation in the Chattooga River watershed (Van Lear, 1995) found that the primary contributor to sedimentation was associated with open graveled and unsurfaced roads. Recreational trails and facilities accounted for only 2.6% of the total number of sediment sources. There is also a high amount of stored sediment in the Chattooga River channel that can be attributed to the geology of the watershed and the highly erosive soils.

In 1999, the Chattooga watershed was selected to be included in the Large-Scale Watershed Restoration Program by the U.S. Forest Service with the goal to restore watershed conditions on both public and private lands. This followed earlier efforts to reduce sediment in the river. Numerous projects have been implemented over the years to reduce sediment input to the watershed and the success of these efforts can be seen in the 2010 303(d) listings for the Chattooga River which indicate that the river is not impaired by sediment.

Comment: The Highlands Dome Geographic Area description and associated goals inappropriately reference high quality brook trout habitat in the headwaters of the Chattooga River.

Response: The Geographic Area narrative and goals have been updated to remove reference to brook trout in the headwaters of the Chattooga River.

Comment: Regarding boaters, the unregulated construction and use of an ever-changing system of river evacuation points, portage trails, and boat launch sites threatens the creation of additional chronic erosion sites. By the fall of 2014 multiple chronic erosion sites could be seen at specific locations along the riverbank where none had existed in the past.

Response: The decision to allow boating on the Upper reaches of the Chattooga River was signed in 2012 and legal challenges to that decision were upheld in 2014. The 2012 Environmental Assessment for Managing Recreation Uses in the Upper Segment of the Chattooga Wild and Scenic River Corridor considered the impacts from boaters and found that the highly diverse biological conditions in the upper reaches of the Chattooga would be protected and that appropriately located trails, designated boater put-ins and take outs, as well as terrain and vegetation would limit where user impacts occur. The revised Forest Plan is not making any changes to boating use and prohibitions that were identified in the 2012 decision.

In 2016, the Chattooga River Boating Access decision was signed which includes the construction of several new trails that provide recreational access to the Chattooga River. The construction of access trails is intended to limit the use of user-created trails in the area and minimize impacts to natural resources including soil erosion and sediment input into the river. Additionally,

boaters are required to have a self-registration boating permit and use only designated put-ins and take-outs, which is more restrictive than for other users, such as hikers.

While the historically high levels of sedimentation in the Chattooga River and its major tributaries have long been recognized as an issue impacting water quality, the degree to which sediment in the Headwaters of the Chattooga River is increasing as a result of boating has not been documented.

Comment: Commenter expressed concern regarding sediment in Scotsman Creek which is classified as Outstanding Resource Waters and is a tributary to the main stem of the Chattooga River. Commenter requests that the sediment transport imbalance on Scotsman Creek be addressed by the Forest Service.

Response: This is a site-specific comment that is outside the scope of forest plan revision. The final plan includes an objective to develop watershed restoration action plans for 10 priority watersheds for restoration over the life of the plan. Issues raised by the commenter regarding Scotsman Creek and the Upper Chattooga watershed could be addressed through this objective.

RECOMMENDED WILDERNESS AND DESIGNATED WILDERNESS

Comment: Several campaigns and form letters included comments advocating for the Big Ivy area of the Appalachian Ranger District to be recommended for wilderness and a National Scenic Area. Commenters pointed to the area's rich biodiversity, old growth forests, clean waters, connectivity to other protected lands, scenic quality and visibility from the Blue Ridge Parkway and widespread public support for these national designations.

Response: All alternatives analyzed some portion of the Craggy Mountains (locally known as Big Ivy area) as recommended wilderness. Alternative C analyzed the smallest area with just the existing Wilderness Study Area being recommended, and Alternative B recommended the largest area representing a proposal received from multiple organizations, which was also supported by a 2016 Buncombe County resolution. Alternative D analyzed an area that was slightly larger than the existing Wilderness Study Area, with a buffer around NFS Roads 74, 5504 and 5555 to allow continued access to the Douglas Falls trailhead and maintenance of wildlife openings.

Following the comment period, elements of commenters' proposal were folded into Alternative E. Alternative E recommends an area for wilderness designation that is slightly larger than the existing Wilderness Study Area and is consistent with agency determinations of wilderness characteristics and management of the area in an unimpaired condition with opportunities for solitude and primitive recreation.

Portions of the area that were surrounded by or adjacent to roads, were excluded from the area recommended for wilderness because of potential road impacts to solitude and undeveloped character. While multiple alternatives considered an area that would "cherry-stem" NFSR 74 out of the recommended wilderness with a 100-foot buffer along each side of the road, the ability to manage a maintenance level 3 road surrounded by wilderness would be challenging. Existing features along this 1.7-mile segment of NFSR 74 include 18 culverts ranging from 18 to 30 inches in diameter, one 60-inch diameter culvert with concrete headwalls, a three-foot high by 500-foot-long concrete retaining wall, and a five-car trailhead parking lot. The Peach Orchard Creek watershed over which this road segment passes has a history of flash flooding, which resulted in

severe road damage during the storms of 2004. Recommending lands within 100 feet of this road for wilderness designation could create management conflicts if future flooding or landslides caused road failure or debris flow onto recommended or designated wilderness. With consideration of road maintenance concerns and heavy use on an open road that accesses the popular Douglas Falls trailhead, the Alternative E recommended wilderness boundary excludes NFSR 74, 5504 and 5555, as well as lands in close proximity to these roads. Alternative E recommends an area which contains the greatest potential for providing a wilderness experience within the Craggy Mountains/Big Ivy area while also being responsive to the recreation and access needs in the area and maintaining the high-quality scenic values.

Alternative E also identifies a large portion of the Craggy Mountains area and part of the Snowball Mountain area as a Forest Scenic Area within the Special Interest Management Area; this will maintain or enhance the area's scenic character. Managing the area outside of recommended wilderness as a Forest Scenic Area will allow motorized access on system roads and mountain biking on system trails to continue, including the opportunity to reroute trails to a more sustainable location and provide an improved recreation experience.

South of the Craggy Wilderness Study area, the Shope Creek area will be managed as Interface MA and Scenic Byway MA in the foreground of the Blue Ridge Parkway. These MAs are consistent with the high level of recreation use that the area receives from both hikers and mountain bikers and will enable the Forest Service to focus on sustainable recreation and trail supply/demand needs in the area. These management areas will also allow continued vegetation management to address ecological needs. A portion of the Big Ivy area north of SR 197, and the western part of the Snowball Mountain area will be managed as Matrix and Interface MAs, allowing for vegetation management consistent with those MAs.

Overall, Alternative E responds to the Craggy Mountains proposal by recommending an expanded area for wilderness (3,222 acres), allocating 11,500 acres as a Special Interest Area/Forest Scenic Area, and recognizing the Shope Creek area for its proximity to the Blue Ridge Parkway, high recreation use. The areas north of SR 197 and a portion of the Snowball Mountain area will be allocated to Matrix and Interface MAs which would allow for continued vegetation management. Projects in this area, as in all of the forest, would require additional public involvement during proposal development. Overall, this allocation addresses the diverse public interests and values in the Craggy Mountains, Big Ivy, Snowball Mountain, and Shope Creek areas by recognizing their ecological diversity, scenic values, and recreational uses.

Recommendation of the Big Ivy area as a National Scenic Area was considered in an alternative but not analyzed in detail in Chapter 2 of the EIS.

Comment: Many commenters expressed support for more wilderness designations while other commenters supported less wilderness designations on the Nantahala and Pisgah NFs.

Comments in support of wilderness included reasons such as preserving forests for future generations, providing additions to existing wilderness in neighboring states, ensuring habitats are preserved in the face of climate change, and providing connectivity of undisturbed forested habitat across the landscape. Comments ranged from general support of additional wilderness designations to naming of specific areas that people felt strongly should be recommended and protected and why these areas have

wilderness characteristics. Some comments suggested that the entire inventory for potential additions to wilderness should be designated as wilderness or included in a management area that provides protection of wilderness characteristics.

Comments in opposition to additional wilderness cited reasons such as constraints on active management, the creation of young forest habitat, and mineral exploration; the loss of forestry related jobs and vehicular access; the loss of maintained wildlife fields; there is already enough wilderness on the forest; and the assertion that backcountry management can provide similar recreation experience without the same constraints as wilderness designation. There were specific concerns related to not being able to achieve restoration and NRV objectives with the designation of additional wilderness. Comments were received both in opposition to specific areas as well as opposition to wilderness in general.

Response: The final EIS contains detailed analysis of five alternatives with a range of wilderness recommendations from 11,120 acres in Alternative C to 126,333 acres in Alternative B. The selected alternative and record of decision recommend 49,131 acres of wilderness. The recommendation in Alternative E includes areas with highest wilderness characteristics and represents a compromise between the protections afforded by wilderness and the management flexibility that is retained in non-wilderness management areas.

The decision to recommend 49,131 acres was informed by the wilderness inventory and evaluation process, in which the Forest identified potentially suitable areas, evaluated their wilderness characteristics with input from the public, and analyzed the impacts of potential wilderness designation in the environmental impact statement. It was the conclusion of the responsible official that the 49,131 acres that are recommended are those areas with the highest degree of wilderness character and due to their remote and inaccessible landscape and adjacency to existing wilderness, there is a lower probability of conflicts with other management goals and multiple uses.

Eight of the fourteen areas that are recommended for wilderness are extensions to existing wilderness (seven in NC, one in TN). Additionally, the recommended Craggy Mountains area is an extension to an existing Wilderness Study Area, and three other WSAs are recommended (Lost Cove, Harper Creek, and Snowbird WSAs).

The decision to recommend additional acres of wilderness was based on a careful consideration of public preferences, and the social, economic, and environmental impacts associated with wilderness designation.

An alternative that recommended the entire inventory of areas considered for wilderness was included as an alternative not analyzed in detail in Chapter Two of the EIS.

Comment: Some commenters expressed support for local timber harvest targets for some areas that should be met in order to earn support for subsequent wilderness designation(s) in that area.

Response: The final plan does not tie wilderness recommendations to timber harvest outputs. The plan revision decision documents will make wilderness recommendations. Areas that are recommended for wilderness have some opportunity for limited vegetation management until such time that they are designated as wilderness by congress.

Comment: The Forest Service should review and correct their mistakes in their evaluation of Terrapin Mountain's wilderness characteristics. The Terrapin Mountain area includes impressive granitic domes and rare plant and animal communities, and supports high quality waters and diverse aquatic communities. The area offers outstanding opportunities for solitude and unconfined/primitive recreation. An important wildlife corridor connects the Terrapin Mountain area to the Ellicott Rock Wilderness Area. The Forest Service has argued that private land inholdings prohibit the wildlife corridor, but much of this land has been acquired by the Forest Service, and under the Eastern Wilderness Act, adjacent private land ownership patterns should not be the sole negating factor for an area's size and manageability as a wilderness area.

Response: The Terrapin Mountain area was evaluated for potential wilderness characteristics following the process required by the 2012 Planning Rule. The core area around Terrapin Mountain has some wilderness characteristics but is less than 1,800 acres in size. The surrounding area also has multiple private inholdings, which could make management to preserve wilderness values difficult. The decision to exclude Terrapin Mountain from further analysis as potential recommended wilderness was based on a comprehensive evaluation of the area which found that it does not meet the criteria defined in planning policy. However, the Terrapin Mountain area does provide a setting consistent with Backcountry management. In the current Plan about 1,600 acres are managed as Backcountry, and under the proposed Plan over 1,800 acres are allocated to Backcountry management area.

Comment: Designating additional areas as recommended wilderness would limit the group size allowed in the area and negatively impact outfitter and guides that operate in areas like Linville Gorge, Lost Cove, and Harpers Creek.

Response: The Forest Plan does not set group size limits in recommended wilderness or Wilderness Study Areas. Group size limits greater than 10 people would be considered when the area is designated as wilderness by Congress.

Comment: The FS should give a preponderance of weight to the resolutions and requests of county commissioners and other elected/appointed public officials who represent and are accountable to the people.

Response: The Forest considered a range of alternatives in response to comments regarding wilderness recommendations. The selected alternative recommends 49,131 acres and was informed by the wilderness inventory and evaluation process, in which the Forest identified potentially suitable areas, evaluated their wilderness characteristics, and analyzed the impacts of potential wilderness designation in the environmental impact statement. The decision of which areas to recommend is not based solely on public comments nor does it give more weight to interest groups or local governments.

Comment: The DEIS fails to provide detail on special use permits in areas recommended for wilderness, it does repeatedly acknowledge the issue in broad terms.

Response: The revised forest plan includes standards specific to the issuance of permits for forest products, scientific research, and commercial special uses in recommended wilderness

areas. Appendix E of the FEIS includes an evaluation of each area that is recommended for wilderness including where special use permits would be impacted by recommendation.

Comment: Standard RW-S-05 which states “Do not expand the existing network of equestrian trails”, should be removed or edited to allow sustainable horse trails in recommended wilderness.

Response: Initially, this plan component was proposed because maintenance of equestrian trails is most effectively done with motorized equipment, which is prohibited in wilderness. Additionally, there are many equestrian trails in Backcountry management area offering a similar experience without prohibitions of trail maintenance with motorized equipment. During the comment period, several partners and user groups expressed a concern regarding this plan component restricting equestrian trails in wilderness or recommended wilderness. Edits to RW-S-05 and CDW-S-03 will read "Manage the trail system only for non-motorized and non-mechanized recreation uses consistent with wilderness values". Consideration of new equestrian trails in wilderness or recommended wilderness would occur on a case-by-case basis following plan direction for sustainable trail planning and management.

Comment: RW-DC-02, consider linking DCs related to rightsizing the road system with opportunities to reduce the presence of motorized travel in Recommended Wilderness and WSAs. The current language in RW-DC-02 seems to foreclose the possibility of decommissioning any existing roads, even if that is the preferred transportation system outcome for a given route.

Response: The desired condition has been updated in response to this comment.

Comment: "CDW-S-04 Limit group size to 10 people in all Wildernesses.... This does not apply to users of the Joyce Kilmer National Recreation Trail." We strongly support this exception, as stated, ONLY on the Memorial Loop. Many school and youth groups visit the area annually, and trying to limit group size while still providing adequate adult supervision, is a constant problem. The exception will allow groups to safely visit the area, but not place an extraordinary burden on their supervisors.

Response: Thank you for your comment. The Forest Service recognizes the popularity of the Joyce Kilmer Memorial Loop and has included the exception to group size to be responsive to this use.

Comment: Recommend that Desired Conditions CDW-DC-04 and CDW-DC-05 be adjusted. Trail-based language in these DCs currently excludes cross country, off-trail wilderness recreation, such as paddling, climbing, hunting or fishing. Planners should add language to include these other wilderness based recreational activities. More specifically, DC-04 could include brief mentions of wilderness paddling, hunting, fishing and climbing. DC-05 could include brief mention of wilderness climbing practice/ethics.

Response: It would be unnecessary and exhaustive to list all types of primitive recreation that occurs within designated wilderness. However, DC-04 has been revised to clarify that that off-trail foot travel may be part of the challenge associated with a primitive recreation experience.

Comment: The CMC supports continued ability to use motorized equipment for trail maintenance in Wilderness Study Areas. Because of the typically remote, rugged terrain quality of potential Wilderness acreage, use of motorized equipment is important for the Club in its maintenance activities for these areas.

Response: Use of motorized equipment for trail maintenance and other administrative management needs will continue to be allowed in recommended wilderness and wilderness study areas until designation as wilderness.

Comment: NS-GLS-04 Evaluate how to best protect wilderness values, mitigate impacts from high visitation, and implement appropriate actions to maintain wilderness character for solitude, naturalness, and primitive and unconfined recreation. It would be helpful to provide some type of guidelines, etc. on how to address/achieve this critical goal. The goal as written is very general, but difficult to achieve without some guidance. Mitigating impacts, protecting and maintaining wilderness character has been a challenge for the Forest Service for decades, and especially for a heavily visited area like Shining Rock. The Plan needs to provide more specific direction in order to achieve this goal.

Response: In addition to the Geographic Area goal the forest plan includes plan components that apply to all designated wildernesses including desired conditions for maintaining wilderness character. In addition, the plan includes a Tier 2 objective to conduct a Limits of Acceptable Change Analysis or Capacity Study to assess existing conditions, impacts to solitude, and if necessary, potential management actions to restore desired conditions (CDW-O-01).

Comment: Overflow Wilderness Study Area, better known by most locals as Blue Valley, should have a recommendation to Congress to release it as a Wilderness Study Area. It is recommended that it be placed into a backcountry Management area.

Response: Wilderness Study Areas were congressionally designated in North Carolina and would require a congressional action to release it from wilderness study. The Forest Plan does not recommend Overflow for wilderness designation; however, releasing it from WSA is outside the scope of the forest plan revision.

NEPA PROCESS

Comment: The FS invested significant dollars in the Environmental Assessment and Decision Making (EADM) series of collaboration meetings and follow-up. We do not believe the Plan, as published, fully adheres to the EADM recommendations. I urge the FS to implement the EADM series of recommendations, intended to move projects forward at a much faster pace, when the final Plan is implemented.

Response: The Forest Service continues to implement NEPA best practices including efficient project management and decision-making processes that were discussed in the EADM collaborative meetings.

Comment: References to best available science should include citations or reference to the DEIS, which should also reference or cite bibliography/literature. More integration of the Plan with the DEIS would improve readability, as many questions about the Plan can be answered in the DEIS, and vice versa.

The DEIS does not meet Best Available Scientific Information (BASI) standards of the 2012 planning rule.

Response: The best available scientific information was used to inform the planning process. The planning record documents how BASI was determined to be accurate, reliable, and relevant to issues being considered. While the forest plan is intended as a tool for implementing

management, the analysis used to support the plan is contained in the EIS and the project record.

Comment: The draft does not include good science-based bibliography in the EIS. This is paramount in a plan. One example, I can find nothing that reflects the "Ray Branch" or "Flat Branch" studies in the EIS. The final plan must be very inclusive with precise documentation.

Response: The literature cited section of the EIS includes a list of all literature that was referenced in the EIS. The Ray Branch study that was referenced was part of the Clinton, 2011 research that was cited.

Comment: The spatial and temporal boundaries of the affected environment must be defined for the cumulative effect analysis. The components of the affected environment considered in a cumulative analysis are the same resources, ecosystems, and human communities that could be affected by the proposal.

Response: The Cumulative effects analysis varies by resource and is defined in individual resource sections of Chapter 3 in the EIS.

Comment: The draft plan does not provide guidance on the temporal and spatial distribution of project activities. The plan should include language to select project areas using HUC-12 watersheds, which can be enlarged if needed. Consider using programmatic or landscape-scale projects to address needs that cannot be efficiently addressed in successive watershed-scale projects.

Response: The plan does not decide on the spatial distribution of future projects. The plan provides management objectives and management areas create opportunities for those objectives to be accomplished. Project planning and design will occur through subsequent NEPA analysis.

Comment: I request that USFS better quantify and explain the scope and impact of acres moving from designations suitable for various forms of management (including prescribed fire and timber harvest) to Recommended Wilderness designation.

Response: Chapter 3 of the EIS includes analyses of forest plan direction and management area allocation, including the effect of recommendations for wilderness.

Comment: The plan should encourage interdisciplinary projects that address multiple interests' needs within a given analysis area.

Response: Implementation of the plan will occur through project planning and design that follows the NEPA process and uses an interdisciplinary approach to project development.

Comment: Commenters suggest that treatment units identified in current projects should be considered in the context of the revised plan and alternatives.

Response: Previously approved and ongoing projects and activities are allowed to go forward or continue. These pre-existing actions were considered part of the baseline in developing the revised plan and its effects.

Projects that are now in the development phase must be consistent with the plan that is active at the time the project is signed. Therefore, projects that are being developed now are being designed with a lens toward both the current plan, and the revised plan. The project NEPA analysis will describe consistency with plan direction.

Once the revised plan is finalized, any projects signed must be consistent with the revised plan. All project or activity approval documents, made after the effective date of the Plan, will describe how the project or activity is consistent with the applicable components.

Comment: We encourage you to involve collaborative partners closely during the development of the monitoring plan. It is important that all partners be on the same page as the agency about monitoring, because otherwise there may be a need to republish the plan in draft for a supplemental comment period.

The Stakeholders Forum encourages the agency to continue collaboration past the comment period and prior to the final plan to develop a monitoring framework that will adequately ensure that management progresses toward meeting desired conditions and NRV goals and does not undermine other interests and objectives.

Response: The monitoring plan incorporates public input in the identification of monitoring questions and indicators. The monitoring chapter of the plan explains that in addition to the monitoring program of key questions and indicators, there will also be a monitoring guide which will be developed after the forest plan has been finalized, will identify the tactical information needed to implement the monitoring program. Partners will be involved in monitoring guide development.

The monitoring chapter of the plan has been updated to clarify that a plan amendment is not needed to update a monitoring question. A change to a monitoring question or an indicator is a substantive change to the plan, which may be made administratively after the public has an opportunity to comment. (36 CFR 219.13). A change to a monitoring guide or annual monitoring work plan is not a change to the plan monitoring program nor other administrative change of the plan and does not require public notification.

Comment: Neither the Draft LRMP nor the Draft EIS informs the public of how records in the administrative record for the plan revision can be accessed.

Response: There is no legal requirement that the forest plan or the EIS include language referencing the administrative record.

Comment: Both the Draft LRMP and the Draft EIS fail to advise the public that FS officials were provided with a 60-day Notice of Intent to Sue under the Citizen Suit provision of the Clean Water Act.

Response: There is no legal requirement that the forest plan or the EIS include language referencing a Notice of Intent to Sue.

ALTERNATIVES

Comment: Commenters stated preferences for certain alternatives or opposition to certain alternatives. Many commenters expressed support of one alternative over another with specific comments on individual plan components or management area allocations.

Commenters expressed concern that the environmental impact statement failed to disclose a preferred alternative. Other comments appreciated that the draft environmental impact statement did not identify a preferred alternative as it allows the Forest Service to choose from among the alternatives.

Commenters stated that the environmental impact statement failed to fully consider a wide range of management alternatives, suggested a range of blended alternatives, or suggested varying alternatives regarding additional recommended wilderness, alternate approaches to ecological management, and vegetation management, among others.

Commenters supported **Alternative B** for the following reasons (from their perspective):

- Alternative B provides flexibility for active management to create healthy forests;
- Increased opportunities for the enhancement of age class diversity and young forest habitat that benefits wildlife;
- The larger footprint of Matrix management area offers more opportunities for timber harvest and timber production across the forest compared to other alternatives;
- Greater inputs to local economies through timber products and jobs;
- The larger footprint of Matrix management area provides more opportunities for open road access that many commenters value;
- Alternative B offers more flexibility for additional trails compared to the other action alternatives.

Several commenters supported Alternative B except for the proposed wilderness recommendations.

Commenters supported **Alternative C** for the following reasons (from their perspective):

- Alternative C proposes to manage the Big Ivy area in a manner consistent with the political, environmental and economic wishes of the community;
- "Ecological Interest Area" designation for the Bluff Mountain area, its larger old growth network, and less wilderness designation;
- Assignment of substantial National Forest lands into the Backcountry and Ecological Interest Area management areas, and its allocation of old growth forest acreage;
- The greater restrictions on timber activity provided by Alternative C;
- Alternative C provides the greatest protection of national forests;
- Alternative C takes the strongest steps to protect the treasure of unspoiled wilderness, old growth and backcountry, rivers and water quality.
- Includes the fewest opportunities for opening seasonally closed roads in Interface and Matrix, and a greater emphasis on decommissioning unneeded roads in Backcountry, with the fewest acres available for new road building.

Several commenters supported Alternative C except for the small amount of proposed wilderness recommendations included in the alternative.

Commenters supported **Alternative D** for the following reasons (from their perspective):

- Alternative D strikes the best balance among all the competing options to move forward for the future management of these Forests for all stakeholders;
- Alternative D is a healthy compromise between B and C;
- It Best balances the multiple use mandate and best serves the American people;
- It offers a strong mix of recreation, sustainability and protection for our forests;
- Alternative D provides a flexible framework that addresses current wildlife habitat diversity needs and future management challenges.

Response: The Forest Service recognizes that there are many different ideas and opinions on how the Nantahala and Pisgah NFs should be managed and how the range of multiple uses of the national forest should be applied across the landscape. The environmental impact statement considered a range of alternatives that emphasized different combinations of uses and land allocations.

The no-action alternative was presented and analyzed in the draft environmental impact statement for the draft revised plan and was summarized in the draft environmental impact statement summary. The no-action alternative was often referred to as the "current plan" alternative, or alternative A.

Alternatives B, C, and D were developed with the input of an unprecedented amount of public input throughout the plan revision process. Chapter two of the EIS describes how the alternatives were developed and explains features that are common to the action alternatives as well as those plan components that differ among alternatives. Alternative E is included in the final EIS as the preferred alternative and includes new and updated plan components based on public input that was received on the draft EIS.

Comment: Commenters felt that the range of alternatives analyzed was insufficient. Several commenters specifically asked for the Forest to consider an alternative that they proposed, including:

- An alternative that maximizes carbon uptake and allows for only passive management of the Forests in which natural processes dominate without human intervention.
- An alternative in which all active management is in a defined Ecological Restoration MA. This alternative would allocate all Mountain Treasures Areas, State Natural Heritage Natural Areas, and old growth areas into management areas that are unsuitable for timber production.
- An alternative that includes the recommendation of National Recreation Areas on the Grandfather and Pisgah Ranger Districts.
- An alternative that includes a National Scenic Area recommendation for a 16,000-acre area of the Black Mountain Geographic Area including the Craggy Mountains, Coxcomb Mountain, Snowball Mountain, Shope Creek, and Ox Creek areas.
- An alternative that recommends wilderness for all areas included in the inventory for potential additions to wilderness or all NC Mountain Treasures.
- An alternative that includes no recommendations for wilderness.
- An alternative that reconsiders management of the Chattooga Wild and Scenic River.

Response: Elements of these suggested alternatives are included in the range of alternatives considered but not analyzed in detail and are described in Chapter 2 of the FEIS. Rationale for not analyzing these alternatives in detail include: they either did not meet the purpose and need and address one or more significant issues were outside the scope of the forest plan, were financially or technologically infeasible, would result in unreasonable environmental harm, or were duplicative of the alternatives considered in detail.

Comment: The Nantahala-Pisgah Partnership submitted a set of recommendations for the revised Nantahala Pisgah Forest Plan that balances stakeholder needs to the fullest extent possible. All of the recommendations presented in the Partnership proposal are connected to one another and are inseparable from the whole. The consensus recommendations have full support that is conditional upon the interrelated recommendations moving forward together.

Response: The Forest Service appreciates the intensive amount of time and effort that the collaborative has engaged in throughout the plan revision process. This comprehensive alternative was presented as having full support of the Partnership *only if all recommendations were taken together*. The entire Partnership alternative was not analyzed in detail because some elements of this alternative are outside the scope of the plan revision. Other elements were not analyzed because they are inconsistent with how the Forest manages multiple resources. The issues, core components, and management area recommendations in the Partnership alternative were carefully considered and many recommendations are addressed in plan components of alternatives analyzed in detail, therefore, a specific alternative reflecting this comprehensive proposal was not developed in detail. See chapter 2 of the EIS for more.

Comment: Some commenters support objectives for permanent openings, regeneration harvest, open forest, and prescribed fire as long as the plan is also making progress on monitoring and special designations such as recommended wilderness.

The Nantahala-Pisgah Partnership shared an external Partnership agreement (i.e., an agreement that would not be included in the Forest Plan) to work together to ensure appropriate levels and geographic distribution of project activities as a prerequisite for Partnership support of Tier 2 Wilderness and Wild and Scenic River Recommendations.

Response: The approaches for how collaborators support one another is not a topic addressed in forest plan language; however, the Forest Service recognizes the value of having collaborative groups support the accomplishment of objectives defined in the forest plan. The Public Involvement and Community Connections sections of the Forest Plan include desired conditions, guidelines, and management approaches that speak to fostering productive cooperation and engagement with local governments and partners, during project development and implementation. Additionally, agency authorities to work with private landowners will be considered and used when appropriate.

Comment: Many commenters support the tiered approach to objectives which relies on the contributions of partners.

Some comments recommend that the Forest Service should have higher objectives or that Tier 2 objectives should be the baseline for Tier 1.

Some commenters do not support the use of tiered objectives in the forest plan and believe the tiered objectives add confusion and misconstrue the goals of the alternatives and objectives.

Response: An objective is a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Inclusion of objectives in the plan does not guarantee funding for these actions. Objectives should be based on reasonably foreseeable budgets (36 CFR 219.7(e)(1)(ii)). Objectives describe the focus of management in the plan area within the plan period; not every action that the Nantahala and Pisgah National Forests may take is included as an objective. Objectives are not intended to be a limit, and planned activities may be exceeded.

Tiered objectives were incorporated into the forest plan in response to public comments on proposed objectives early in the planning process. There was high public support for increasing objectives across multiple resource areas and the Forest Service, but the Planning Rule limits on reasonably foreseeable budgets constrained the ability to plan beyond recent and anticipated budgets. With public input, the plan differentiated between Tier 1 and Tier 2 objectives. Tier 1 objectives are based on a continuation of recent Forest Service budgets and capacity, while Tier 2 objectives reflect additional outcomes that may be possible with added capacity of partners and partner resources. The final plan clarifies that any individual objective may proceed to Tier 2 when additional capacity and resources are available for that action. The inclusion of two tiers of objectives added a level of complexity to the EIS analysis and all resource areas analyzed the effects of both tiers in Chapter 3 of the EIS.

Several objectives were updated between draft and final and new objectives were added for multiple resource areas.

Comment: The plan does not include clear direction on how or when the USFS will move to a Tier 2 objective level. Desire to move to Tier 2 objectives will not be consistent with all partners.

If a trigger for moving between Tier 1 and Tier 2 is needed, one must assume that the DEIS does not adequately analyze the impacts of Tier 1 and Tier 2 actions.

The tiered objective concept is consistent with legal requirements only if it includes adaptive management alerts that allow for a move from Tier 1 to Tier 2. Alerts are essential to show that we have the ability to stretch from one tier to the next. How will the Forest Service know whether moving to Tier 2 for one resource will not prevent the accomplishment of other related resource objectives in light of capacity limitations?

The Forest Service did not do an adequate analysis on how a tier transition in one resource could affect another resource.

The Forest Service is relying on the tiered structure to show a range of alternatives; as a result, the Forest Service must acknowledge the different impacts of each tier.

Response: Moving from Tier 1 to Tier 2 objectives for an individual resource is dependent on the additional capacity and resources that are contributing to the achievement of the objective. The final plan clarifies that any individual objective may proceed to Tier 2 when additional capacity and resources are available for that action.

All resource areas analyzed the effects of both tiers of objectives in Chapter 3 of the EIS, so the impact of moving to a Tier 2 objective on individual and integrated resources has been analyzed.

The plan's monitoring program and adaptive management framework will evaluate whether plan direction and management are effective in maintaining or achieving progress toward the desired conditions and objectives for the plan area.

Comment: The analysis did not adequately compare the effects of alternatives and show tradeoffs needed to inform the public and support a reasoned decision. Specifically, the DEIS does not show important differences (both advantages and disadvantages) between Alternatives B, C, and D; nor does it show important differences between Tier 1 and Tier 2 objectives.

The EIS does not adequately compare the effects of alternatives as they relate to road building and impacts, carbon storage, nonnative invasive species, base cation depletion, soil erosion risk, and species composition.

Response: Chapter 3 of the EIS describes the environmental effects of implementing each alternative of the plan, and the effects of meeting Tier 1 and Tier 2 objectives for each resource area. The analysis is organized by resource area and includes separate sections organized by physical, biological and social and economic resource. The EIS is an integrated document, so the effects of a single activity are discussed in multiple resource sections. For example, the effects of road building are discussed in the EIS in several sections including but not limited to the soil, water, cultural resource, and transportation resource sections. All of the topics identified in this comment have been analyzed in Chapter 3 of the EIS, and where those effects differ by alternative, this is disclosed.

Comment: The EIS does not adequately compare how the alternatives differ in terms of impacts from regeneration treatments on conservation priority areas (Wilderness Inventory Areas, Natural Heritage Natural Areas, and old growth).

Response: The effects of timber harvest on forest that is aging toward old forest seral stages is described EIS Chapter 3, Terrestrial Ecosystems, subsection Forest Structure, as well as in the individual Ecozones subsections. Chapter 3 also includes a section analyzing the effects of the designated old growth network.

Some forest sites that contain biodiversity significance are recognized by the North Carolina Natural Heritage Program as Natural Heritage Natural Areas (NHNAs). NHNAs are not a Forest Service allocation. Rather than analyze effects to NHNAs as a separate indicator, the forest plan analysis addresses the ecological integrity of these areas by considering the ecological values that these areas are recognized for and describes the effects to these areas in the context of the ecozones and unique habitats, species groups, rare species, and designated old growth network sections covered in the Chapter 3 Aquatic and Terrestrial Ecosystem analysis.

“Wilderness Inventory Areas” are not a FS recognized land allocation. The Plan Revision Process requires inventorying all lands that may be suitable for inclusion in the National Wilderness Preservation System. The inventory was based on a very inclusive process using criteria that included size as well as roads and other improvements. As this was a broad inventory, not all

areas within the inventory were identified as having wilderness characteristics. Inclusion in the inventory is not a designation that conveys or requires a particular kind of management, nor does inclusion in the inventory require a different analysis of effects in the EIS. The effects of plan activities on forest resources are described throughout the Chapter 3 resource sections. EIS Chapter 3 Wilderness section evaluates the effects of recommending different packages of areas for wilderness.

Comment: The range of alternatives failed to consider the protection of portions of WIAs by putting them into Group 1 MAs across all alternatives.

Response: “Wilderness Inventory Areas” are not a FS recognized land allocation. The Plan Revision Process requires inventorying all lands that may be suitable for inclusion in the National Wilderness Preservation System. The inventory was based on a very inclusive process using criteria that included size as well as roads and other improvements. As this was a broad inventory, not all areas within the inventory were identified as having wilderness characteristics. Inclusion in the inventory is not a designation that conveys or requires a particular kind of management.

The management area allocation for lands in the inventory varies by alternative. The final EIS includes an updated section in Chapter 2 that explains how management area allocation decisions were made for Matrix, Ecological Interest Area and Backcountry in the action alternatives. Generally, Alternative C is responsive to this concern as it allocates the fewest amount of acres to Interface and Matrix, placing areas not recommended for wilderness into Backcountry or Ecological Interest Area. Alternatives B, D and E alternatives placed more acres of these areas into Matrix and Interface, depending on the features of the area and the theme of the alternative. The effect of the alternatives’ different land allocations is the subject of the resource analyses contained in Chapter 3 of the EIS.

Comment: The national and regional conservation significance of the Mountain Treasures, in an all-lands context, must be considered when comparing alternative land allocations in the DEIS.

All North Carolina Mountain Treasures (MTs) should be managed to maintain or restore their wildland values, be found "unsuitable for timber production, and should be off limits for the construction of new linear rights of way, like utilities or highways.

Response: “North Carolina Mountain Treasures” are not an FS recognized land allocation; this is a term coined by the Wilderness Society in non-governmental organization reports. The plan’s management area allocation varies by alternative. The final EIS includes an updated section in Chapter 2 that explains how management area allocation decisions were made for Matrix, Ecological Interest Area and Backcountry in the action alternatives. Generally, Alternative C is responsive to this concern as it allocates the fewest of these areas to management areas suitable for timber production. The effect of the alternatives’ different land allocations is the subject of the resource analyses contained in Chapter 3 of the EIS.

GENERAL COMMENTS

Comments: Many comment letters provided editorial comments including grammatical edits and formatting edits.

Response: Grammatical and formatting edits have been incorporated in the final plan and EIS.

Comment: Many comments expressed general concern regarding the protections of the National Forests for future generations.

- The National Forests are part of the breath and heart of this area and need to be held to the highest standard of protection, for our use now and for future generations. In any new management plan for the forests, I want to see increased protection for old growth areas and all waterways.
- Please protect and honor our trees and biodiversity for us and the generations to come.
- Please conserve this and any other lands in western North Carolina for all of us and for future generations.

Response: For more than 100 years, the Forest Service has been stewarding these public lands for present and future generations. The forest plan guides the Nantahala and Pisgah NFs in fulfilling its stewardship responsibilities to best meet the current and future needs of the American people. The forest plan includes direction to maintain and improve the health, diversity, and productivity of the Nantahala and Pisgah National Forests.

Comment: Commenters expressed concern that comments from scientists, local residents, hikers, and businesses that depend upon recreation get less 'weight' than comments from loggers and residents that support more active management.

Response: The consideration of public comments is not a process in which the outcome is determined by the majority opinion. All comments have been treated equally. They are not weighted by organizational affiliation, status of respondents, or volume of letters received.

Comment: Several comments expressed general support for the revised plan and the need for science-based management of the national forests consistent with the Multiple-Use Sustained-Yield Act and the 2012 Planning Rule.

Response: Thank you for your comments and support. The Forest Plan and EIS are based on best available scientific information.

Comment: Several comments expressed general opposition to the revised plan, including any of the alternatives that were analyzed. Suggestions were made to start the plan revision process over or to present a plan that does not include any vegetation management.

Response: An alternative that addresses only custodial management of the forest was considered but not analyzed in detail. In 2014, the Need for Change identified several aspects of the 1994 Land Management Plan that need updating to be consistent with the 2012 Planning Rule, to incorporate best available science and to respond to emerging trends and issues on the forest.

Comment: The draft plan proposes to open 50-61% of the forest to logging, and it plans to increase timber harvests annually by up to 300%. There should be a commensurate increase in protected areas, which provide for the highest quality recreation, scenery, water quality, and user experience.

Response: The EIS analysis shows that to keep the forest healthy and strong more young, very old and open forest is needed. The EIS also demonstrates that timber harvest is a tool to sustain healthy ecosystems and habitats, including the species that depend on young and open forest. Currently, the forest harvests 850 acres annually, across a 1.05 million acre forest, which is less than 1/10 of a percent annually. The objectives in the plan that would use timber harvesting (regeneration and thinning), identify roughly 22,000 acres per decade (Tier 1) or up to roughly 47,000 acres per decade (Tier 2). This equates to approximately 2.1 percent (Tier 1) to 4.5 percent (Tier 2) of the total land base being impacted by timber harvesting during a decade. The EIS shows that at Tier 2 levels the forest can reach the desired amount of young forest habitat needed to support the wildlife and plants that depend on it.

The plan and EIS also recognize that some ecological needs are best addressed without timber harvest. The final plan calls for doubling the amount of land in Special Interest Areas that focus on places that have unique ecological, cultural or scenic value. The Forest Plan includes 110,000 acres in Special Interest Areas, an increase from 41,000 acres in our current plan. Additionally, the plan recommends approximately 49,000 acres for wilderness designation (in addition to the 66,000 in existing wilderness). The plan identifies eight newly eligible Wild and Scenic Rivers (WSRs) in addition to the ten eligible WSRs and three existing Wild and Scenic Rivers that will be maintained for their free-flowing nature and outstandingly remarkable values. The final plan identifies 265,000 acres in the designated old growth network that will be managed to maintain and improve old growth characteristics.

Overall, the plan recognizes the balance of both active and passive management in managing these forests.

Comment: Several comments were made regarding specific actions on the ground or places on the forest.

Response: The forest plan provides a programmatic framework for implementing actions over the next 10 to 15 years. Comments that proposing actions in specific locations of the forest are outside the scope of the planning process. Specific actions will be considered and analyzed through site-specific NEPA and include public involvement and cooperation with interested parties.

CHAPTERS 1 AND 2 OF THE FOREST PLAN AND EIS

Comment: The fourth bullet under "Across all Forest Resources" (p. 15 of the draft plan) lists that we "Recognize ...the role of the forest's contribution for social and economic sustainability." The Partnership recommends that this bullet be modified or another added that addresses the contribution and role of the Forest in ecological services within the all-lands context. While those resources are called out in later sections, they appear siloed to National Forest System Lands only.

Response: The Key Finding from the Assessment and Need for Change that are listed in Chapter 1 are reflective of findings from the 2014 Assessment report. The FS recognizes that the forest

provides ecological services in the broader lands context as well and addresses these through Geographic Area goals as well desired conditions in the forest plan.

Comment: This bulleted section (list of Key Findings from the Assessment and Need for Change), completely omitted calling out the need for significantly increasing woodland or open forest condition at landscape scale.

Response: The Key Finding from the Assessment and Need for Change that are listed in Chapter 1 are reflective of findings from the 2014 Assessment report. The emphasis on woodlands and open forest conditions became clearer after the initial Need for Change was identified and has been subsequently incorporated into plan components.

Comment: Under the theme of Providing Clean and Abundant Water, the Partnership recommends adding "maintaining water quality" to the last sentence as follows: "Objectives under this theme address watershed improvement projects, maintaining water quality, road maintenance..."

Response: This language was adopted in the final plan.

Comment: The EIS lists economic contributions of the NF and Primarily points out gathering of plants, timber related jobs, and tourist related jobs. What about possible mineral and or mining related jobs?

Response: This list of economic contributions of the NF is not comprehensive of all products and services provided by the Nantahala and Pisgah NFs; however, minerals was added to the list in response to this comment.

Comment: The 2012 planning rule requires the Plan to delineate the plan area's distinctive roles and contributions within the broader landscape as well as the conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area. The Forest Service can't achieve this mandate if it limits its analysis to only those conditions within national forest boundaries.

Response: The plan identifies the scope within the broader context of the 18-county area (Chapter 1). The EIS analysis for each resource area describes the geographic scope for the effects including the cumulative effects area. At minimum, each resource considers the 18-county planning area, and some resources such as climate change, consider a broader area.