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Ecosystem Management Coordination
United States Forest Service
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Submitted via comment portal: https://cara.fs2c.usda.gov/Public//CommentInput?Project=65356

RE: Scoping Comments Regarding Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System, Notice of Intent to Prepare an Environmental Impact Statement

Dear Ms. Walker: February 2, 2024

On behalf of Silvix Resources, National Wildlife Federation, North Carolina Wildlife Federation, New Mexico Wildlife Federation, Montana Wildlife Federation, Forest Stewards Guild, Idaho Conservation League, Conservation Northwest, Center for American Progress, Southern Environmental Law Center, Sierra Forest Legacy, Sustainable Northwest, Environmental Defense Fund, and our members and supporters, we are pleased to provide the Forest Service with comments in response to the agency's notice of intent to prepare an environmental impact statement to analyze the development and implementation of a nationwide forest plan amendment to conserve old growth forests. Forest Service, *Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System, Notice of Intent to Prepare an Environmental Impact Statement*, 88 Fed. Reg. 88,042 (Dec. 20, 2023) (NOI). The Forest Service is taking this action in response to direction from President Biden in his Executive Order 14072, *Strengthening the Nation's Forests, Communities, and Local Economies* (EO 14072), which directs the federal land management agencies to define, inventory, and develop conservation strategies for the conservation of mature and old growth forests (MOG)[1] across the federal estate.

We applaud the Forest Service for taking this historic step forward towards conserving, restoring, and recruiting older forests across the National Forest System (NFS). For too long, forest management has been characterized by significant controversy over the harvest of older forests for commercial timber production purposes. The interrelated threats of climate change, uncharacteristic wildfire, and insects and disease-related mortality only exacerbate a legacy of forest management that has left old growth conditions exceedingly rare across America's forests. A rational, consistent policy and management direction of MOG that uses ecological integrity as its north star guiding principle and goal is therefore long overdue. Thank you for taking this bold action for the betterment of our forests, communities, and planet.

[1] References to MOG throughout these comments refer to the definitions contained in the Forest Service's technical report, MATURE AND OLD-GROWTH FORESTS: DEFINITION, IDENTIFICATION, AND INITIAL INVENTORY ON LANDS MANAGED BY THE FOREST SERVICE AND BUREAU OF LAND MANAGEMENT (hereinafter, MOG DEFINITION TECHNICAL REPORT) (April 2023). References to "older forests" include both mature and old growth forests.

I. Executive Summary.

Our comments set forth our perspectives in detail. However, we wish to offer a few high-level observations at the outset.

First, although it is somewhat implicit in the proposed amendment and NOI, we believe that it is essential that the Forest Service clearly state in the DEIS supporting the amendment, and the amendment itself, that the occurrence and abundance of old growth forest conditions are vastly depleted from historical conditions and that this policy's intent (and effect) is to reverse those trends. This will be the touchstone for adaptive management as the policy is implemented. The fact of the matter is that we need more resilient and sustainable old growth forests on the NFS to address the climate crisis, restore forest process and function, respond to stressors such as wildfire and drought, provide ecosystem services to society, and to respect Indigenous stewardship of these forests and fulfill the federal government's trust and treaty obligations. Maintaining the status quo's depauperate levels of old growth forest conditions is neither sufficient nor adequate.

To achieve that objective, it is a basic silvicultural principle that old growth forests must be recruited from mature forests: those forests that are on the cusp of exhibiting older forest characteristics and are likely to "age into" old growth either through passive or active management. While we understand that the Forest Service is not proposing a comprehensive nationwide policy regarding the management of mature forests in this amendment, the proposed amendment must still provide clear direction for the development of *future* old growth by adequately planning for the recruitment of it now and spatially identifying areas as recruitment opportunities and priorities. Indeed, our Alternative C provides an example of how to accomplish this objective. Regardless of how it is structured, the proposed amendment should reflect the agency's clear intent to recruit old growth forests to improve their abundance and distribution and provide that direction in the form of concise plan components.

Second, and relatedly, while the agency takes immediate steps to increase abundance, distribution and representativeness of old growth conditions, it is critical that the Forest Service establish an approach to identify the appropriate levels of old growth abundance to sustain ecological integrity and the ecosystem services that older forests provide to society. While we recognize that the answer to this question is perhaps largely a social question that may be best addressed at the individual forest level, it also contains a scientific component that the agency should begin addressing with haste.[2] We believe that while imperfect, using the historic range of variation (HRV) to determine an estimate of the historical occurrence, arrangement, and connectivity of MOG forests can establish an environmental baseline against which to compare existing conditions and desired conditions, information which in turn can be used to develop place-based approaches to both mature and old growth forest conservation, restoration, and recruitment.

[2] We note that there is uneven data availability across the NFS. For example, the Northwest Forest Plan (NFP) region has been monitoring mature ("late-successional") and old growth forest conditions since 1994, and possesses detailed information and maps of these forest conditions across the range of the northern spotted owl. This information has been critical to informing the climate-smart forest plan amendment of the NFP. The Forest Service should replicate the data sources and analysis utilized by Regions 5 and 6 across the NFS.

Finally, while we generally support many of the plan components in the proposed amendment, we cannot support a few of the exceptions to the proposed standards. While some exceptions could be clarified such that we could support them, others are simply too broad and lack accountability. We have proposed redlines amendment and alternative approaches to the proposed that address these concerns.

Our comments are arranged in the following manner:

Technical comments. These comments are further divided into **procedural considerations** and **substantive considerations** and include proposed corrections to address our concerns.

Our technical comments are followed by **alternatives to the preferred action**, the proposed amendment. These alternatives include: 1) redlines to the proposed amendment; 2) Alternative A, which is a reformulation of the proposed amendment; 3) Alternative B, which is based on Alternative A but specifically provides direction for seasonally dry forests; and 4) Alternative C, which operationalizes the MOG management approach proposed by the Connecticut Department of Energy and Environmental Protection, Division of Forestry[3] in its response to the Forest Service's request for information that preceded the agency's advanced notice of proposed rulemaking and highlighted in our comments on the agency's Advanced Notice of Proposed Rulemaking (ANPR).[4] We are providing these alternatives to inform the agency's development of alternatives for the forthcoming DEIS, and specifically ask the Forest Service to include Alternative C or a modified version of it.

Next, our comments include examples of **implementation of existing collaborative conservation strategies** that are similar to the Adaptive Strategies envisioned by the proposed amendment.

Finally, we provide additional **recommendations for supplemental policies and changes to agency capacity to support implementation of the proposed amendment**. These recommendations focus on funding, staffing, and additional policies that we believe are essential to successful implementation of the proposed amendment.

II. Proposed Plan Content Technical Comments.

The collective set of lenses through which we evaluated the proposed amendment are the degree to which the proposed amendment is implementable,[5] durable,[6] feasible,[7] viable,[8] enforceable,[9]

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[3] *See* State Responses to Request for Information on Federal Old-Growth and Mature Forests, 12-14 (comments of Connecticut Department of Energy and Environmental Protection, Division of Forestry) (2022).
[4] United States Forest Service, *Advanced Notice of Proposed Rulemaking, Organization, Functions, and Procedures; Functions and Procedures; Forest Service Functions*, Docket Number PTO–P–2020–0022, RIN 0596–AD59 (80 Fed. Reg. 24,497, April 21, 2023).
[5] Can the Forest Service implement this policy given funding, staffing, and other capacity constraints?
[6] Is this a policy that will stand the test of time?
[7] Can the Forest Service complete policymaking in the first term of the Biden administration?
[8] Do the politics indicate that this policy has the support of important constituencies?
[9] Is the policy more than a paper tiger?

accountable,[10] and effective.[11] We also evaluated whether the proposed amendment complies with the Forest Service's 2012 planning rule (planning rule or rule) and other environmental laws, particularly the National Environmental Policy Act (NEPA), recognizing that the Forest Service is only now commencing the environmental analysis and compliance process with this Notice of Intent (NOI).

While we are strongly supportive of the intent and purpose and need of the proposed amendment, we have reservations about its durability and accountability as written and structured, which raise questions about the amendment's effectiveness. We therefore offer the following suggestions and proposed redlines in an effort to improve the proposal, which are divided into procedural considerations and substantive considerations.

A. Procedural Considerations.

In this section, we provide feedback pertaining to procedural considerations relevant to promulgation of a nationwide forest plan amendment.

1. New and Consistent Definitions.

We believe that new and/or harmonized definitions may be beneficial to implementation of the proposed amendment. First and importantly, we note that the 2012 planning rule uses the phrase "native knowledge" to describe:

> A way of knowing or understanding the world, including traditional ecological and social knowledge of the environment derived from multiple generations of indigenous peoples' interactions, observations, and experiences with their ecological systems. Native knowledge is place-based and culture-based knowledge in which people learn to live in and adapt to their own environment through interactions, observations, and experiences with their ecological system. This knowledge is generally not solely gained, developed by, or retained by individuals, but is rather accumulated over successive generations and is expressed through oral traditions, ceremonies, stories, dances, songs, art, and other means within a cultural context.

36 C.F.R. § 219.19 ("native knowledge"). However, the proposed amendment uses the language "Indigenous Knowledge," which is the phrase preferred by most Indigenous Peoples. While we defer to Indigenous Peoples' language preferences and we, too, prefer this phrase, "Indigenous Knowledge" is not defined in the proposed amendment and could lead to confusion in implementation. We therefore suggest that the Forest Service define "Indigenous Knowledge" in the proposed amendment by referring to the 2012 planning rule's definition in the following way, which is nearly identical to the definition of "native knowledge" in the planning rule with the addition of underlined text:

> Indigenous Knowledge is a way of knowing or understanding the world, including traditional ecological and social knowledge of the environment derived from multiple

[10] Does the policy strike the right balance between discretion and accountability (trust but verify)?
[11] Does this policy accomplish the desired outcome(s)?

generations of indigenous peoples' interactions, observations, and experiences with their ecological systems. Native knowledge is place-based and culture-based knowledge in which people learn to live in and adapt to their own environment through interactions, observations, and experiences with their ecological system. This knowledge is generally not solely gained, developed by, or retained by individuals, but is rather accumulated over successive generations and is expressed through oral traditions, ceremonies, stories, dances, songs, art, and other means within a cultural context. *See also*, 36 C.F.R. § 219.19 ("native knowledge").

We also suggest the following Indigenous Knowledge-related and management terms that may be useful throughout the amendment and in the DEIS:

Reciprocity is the fundamental awareness that humans and ecosystems have mutually shared needs. It involves mutually beneficial relationships between cultural stewards and the land, plants, and animals they live among and rely on. In a reciprocal culture, people have a strong connection to a place and a moral responsibility to care for that place and its living beings.

Place-Based Reciprocal Stewardship is an ethical value that grounds planning and management and applies that value to stewarding nature, the economy, health, cultural resources, property, and information. Indigenous Peoples and their cultural practices exemplify place-based reciprocal stewardship. An essential component of climate adaptation today, this approach emphasizes learning by doing and local connection of people to the places that sustain them and are sustained by them. Examples include intentional burning, forest thinning, other fuel reduction treatments, non-lethal pest management, postfire management, and collecting the seeds of native species to assist forest community regeneration.

Ecocultural Restoration is the process of restoring key historic pre-contact, pre-industrial ecosystem structures, processes, and functions, and the Indigenous cultural practices that helped shape ecosystems. Braiding together western science with IK to inform adaptive stewardship of forests restores the practice of place-based stewardship. In this manner ecocultural restoration creates and maintains diverse and healthy landscapes that are adapted to climate change and wildfires. WS provides powerful tools for learning but alone is insufficient to address challenges associated with anthropogenic climate change, human development, and increasingly severe disturbances. Restoring these forests requires honoring and understanding IK, the relationships with the land it embodies, and braiding it together with western science to guide land stewardship ethics and planning.

Co-Stewardship refers to a broad range of working relationships between the federal government and American Indian and Alaska Native Tribes, as well as Tribal consortia and Tribally led entities exercising the delegated authority of federally recognized Tribes. Co-stewardship can include co-management, collaborative management, and Tribally led stewardship, and can be implemented through cooperative agreements, memoranda of understanding, self-governance agreements, and other mechanisms.

Co-Management describes arrangements to manage natural resources with shared authority and responsibility. While treaty rights, legislation and other legal mechanisms have fostered such arrangements, co-management is more generally the result of extensive deliberation and negotiation to jointly make decisions and solve problems.

In addition, because the amendment frequently refers to "proactive stewardship" and "proactive stewardship activities," we suggest the following definition of that phrase:

Proactive Stewardship Activities means affirmative actions, complementary to natural succession, to move toward reference conditions for old growth. Proactive Stewardship Activities includeactions to: 1) provide landscape-level redundancy and representation of old-growth conditions such that loss due to natural disturbance events does not result in a loss or isolation of the old-growth conditions at the landscape scale; 2) retain and promote the development of resilient old-growth conditions adjacent to existing old-growth forest conditions, including for the purposes of reducing fire hazard, altering potential fire spread or fire severity, or reducing potential insect or disease outbreak that may spread to adjacent old-growth forest; 3) enhance landscape and patch connectivity by fostering old forest conditions between old-growth condition patches where connectivity is poor or old-growth patches are isolated; 4) retain and promote the development of old-growth conditions where current conditions are likely to provide old-growth conditions in the shortest timeframe possible; 5) retain and promote the development of old-growth conditions in watersheds, firesheds, or other relevant landscape units where existing amounts and distributions of old-growth conditions lack resilience and adaptability to stressors and likely future environments; 6) retain and promote the development of old-growth conditions in areas of likely climate refugia that are projected to have the inherent capability to sustain old-growth conditions; and/or 7) promote climate adapted species assemblages in areas where changing climatic conditions are likely to alter current conditions and change species assemblages over time.

Proactive stewardship activities promote one or more of the following: 1) the amount, density and distribution of old trees, downed logs, and standing snags; 2) the vertical and horizontal distribution of old-growth structures, including canopy structure; 3) the patch size characteristics, percentage or proportion of forest interior, and connectivity; 4) the types, frequencies, severities, patch sizes, extent, and spatial patterns of disturbances; 5) the return of appropriate disturbance regimes and conditions such as fire; 6) successional pathways and stand development; 7) connectivity and the ability of native species to move through the area and cross into adjacent areas; 8) the ecological conditions for at-risk species associated with old-growth forest conditions; 9) the presence of key understory species or culturally significant species or values; 10) species diversity, and presence and abundance of rare and unique habitat types associated with old-growth forest conditions; or 11) other key characteristics of ecological integrity.

This definition combines the analytical requirements of the proposed Guideline and Standard 2 to set forth clear and objective management actions designed to conserve and recruit old growth

trees and forests. In addition, by combining the analytical requirements into a single definition, the proposed amendment's narrative plan content can be streamlined for ease of reading and implementation.

In addition, we note that while the MOG DEFINITION TECHNICAL REPORT provides working definitions of mature and old growth *forests*, it does not include definitions of mature and old growth *trees*. Both trees and forests are of ecological concern, and it is often appropriate - particularly in the management setting - to distinguish between the two and provide different although complementary management direction. In our comments, redlines, and suggested alternatives we use the word "tree" with intention to denote individual specimens that are themselves older (either mature or old) and are appropriate for the present site conditions and anticipated future conditions. We encourage the Forest Service to develop definitions of mature and old growth *trees* as it refines its Inventory or through place-based collaborative efforts such as the Adaptive Strategies envisioned by the proposed amendment.

2. Substantive Provisions of the 2012 Planning Rule Implicated by the Purpose and Need or Effect of the Amendment.

When amending a forest plan or plans, the 2012 planning rule requires the Forest Service to "base an amendment on a preliminary identification of the need to change the plan" and "determine which specific substantive requirement(s) within §§ 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment." 36 C.F.R. §§ 219.13(a), (b)(1), (b)(5). Furthermore, "the responsible official's determination must be based on the purpose for the amendment and the effects (beneficial or adverse) of the amendment, and informed by the best available scientific information, scoping, effects analysis, monitoring data or other rationale." *Id*. at § (b)(5)(i). Thus, based on the purpose of the amendment and the effects of the amendment, the best available western and Indigenous scientific information, effects analysis, and monitoring data or other rationale, the Forest Service must determine which substantive provisions of the 2012 rule are directly related to the plan direction being added by the amendment and apply those provisions of the 2012 rule to the amendment. *Sierra Club v. Forest Serv*., 897 F.3d 582 (4th Cir. 2018); *Wild Virginia v. Forest Serv*., 24 F.4th 915 (4th Cir. 2022).

The substantive provisions of the rule that are implicated by the amendment's purpose and/or effects must be identified in scoping. 36 C.F.R. § 219.13(b)(2) ("The responsible official must include information in the initial notice for the amendment (§ 219.16(a)(1)) about which substantive requirements of §§ 219.8 through 219.11 are likely to be directly related to the amendment (§ 219.13(b)(5))"). The NOI for the amendment identified several substantive provisions of the planning rule, 88 Fed. Reg. 88,045-046, but omitted others. The failure to accurately identify the substantive provisions of the 2012 rule implicated by the amendment is a potential NFMA violation. Omitted substantive provisions of the rule include: 36 C.F.R. § 219.9(a)(1), "Ecosystem integrity;" 36 C.F.R. § 219.11(a)(1), "Lands not suited for timber production" and analytical requirements (i) through (vi); and 36 C.F.R. § 219.11(c), "Timber harvest for purposes other than timber production."

The planning rule states that "As required by § 219.8(a), the plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity." 36 C.F.R. § 219.9(a)(1) ("ecosystem integrity"). This substantive provision of the rule is implicated by the amendment because the amendment seeks to "maintain or restore the ecological integrity of terrestrial...ecosystems and watersheds in the plan area" through new "plan components to maintain or restore the[] structure, function, composition, and connectivity" of old growth forest conditions across each unit. *See generally*, 88 Fed. Reg. 88,043 – 046 (preamble discussion regarding purpose, need, and intent of amendment); *see also*, *id.* at 88,046 (proposed Distinctive Roles and Contributions of old growth forests and trees include their "variability in canopy *structure*, patchiness, and development pathways depending on disturbance regimes and resulting *patterns*" and referring to "the *structure and composition* of old-growth forests" as well as "Tribal and Indigenous practices have maintained resilient forest *structure and composition* of forests that harbor high *structural and compositional diversity*") (emphasis added); 88,047 (proposed Desired Condition 2) ("Proactive stewardship, including for retention and recruitment, along with natural succession, foster an increasing trend in the *amount, representativeness, redundancy, and connectivity* of old-growth forest conditions such that future conditions are resilient and adaptable to stressors and likely future environments") (emphasis added); (proposed Desired Condition 4 ("The long-term abundance, distribution, and resiliency of old growth conditions contribute to the overall *ecological integrity of ecosystems and watersheds*") (emphasis added)); (proposed Standard 1) ("vegetation management activities must not degrade or impair the *composition, structure, or ecological processes* in a manner that prevents the long-term persistence of old-growth forest conditions within the plan area") (emphasis added); (proposed Standard 2(a)) (vegetation management "in old growth forest conditions must be for the purpose of proactive stewardship, to promote the *composition, structure, pattern, or ecological processes* necessary for the old-growth forest conditions to be resilient and adaptable to stressors and likely future environments") (emphasis added); (proposed Standard 2(a)(ii)) (vegetation management shall promote old growth forest *structure*); (proposed Standard 2(a)(iii), (vii) (vegetation management shall promote old growth forest *connectivity*); (proposed Standard 2(xi) (vegetation management shall promote, among other considerations, "other *key characteristics of ecological integrity*")) (emphasis added); 88,048 (monitoring question B, "Are vegetation management activities within old growth forest promoting the *desired composition, structure, pattern, and ecological conditions*?" and indicator i, "Changes in *composition, structure, and patterns* related to desired ecological conditions in areas affected by vegetation management"); (proposed Guideline) (proactive stewardship activities should be developed for, among other purposes, "of fostering an increasing trend in the *amount, representativeness, redundancy, and connectivity* of old-growth forest conditions...") (emphasis added).

Given the language of the proposed amendment, 36 C.F.R. § 219.9(a)(1), "Ecosystem integrity," is a substantive provision of the planning rule directly related to the amendment and should be addressed in the amendment and DEIS.

The amendment and its effects also implicate 36 C.F.R. § 219.11(a)(1) and § 219.11(c).[12] 36 C.F.R. § 219.11(a)(1) and its analytical requirements (i) through (vi) pertain to "lands not suitable for timber production," which appears to be the ultimate administrative fate of old growth forests under the amendment, even though this term of art is not used.[13] The Forest Service should have identified old growth forests as not suitable for timber production for at least two possible reasons: either because "statute, Executive Order, or regulation prohibits timber production on the land," 36 C.F.R. § 219.11(a)(1)(i), and/or because "timber production would not be compatible with the achievement of desired conditions and objectives established by the plan for those lands," *id*. at § 219.11(a)(1)(iii). The first analytical requirement is likely applicable to the amendment because President Biden's EO 14072 directs the Forest Service to, among other things, conserve mature and old growth forests over time, which – in the agency's expertise – means that these lands should not be subject to the "purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use," thus rendering these lands not suitable for timber production. 36 C.F.R. § 219.19 (definitions). The second analytical requirement is likely applicable to the amendment because the "purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use" (i.e., timber production) is "not...compatible with the achievement of desired conditions and objectives established by the plan for those lands," 36 C.F.R. § 219.11(a)(1)(iii), because the proposed Desired Conditions and Objective work together to increase the amount, distribution, representativeness, redundancy, resilience, and connectivity of old growth conditions across the NFS, 88 Fed. Reg. 88,047 (proposed Desired Conditions and Objective), conditions and objectives that the amendment establishes cannot be achieved through primarily economic (i.e. industrial or consumer use) purposes, *id.*

Given the language of the proposed amendment, 36 C.F.R. § 219.11(a)(1) is a substantive provision of the planning rule directly related to the amendment and should be addressed in the amendment and DEIS.

To address this potential issue, the Forest Service is advised to incorporate 36 C.F.R. § 219.11(c) into the amendment, which states that

> ...the plan may include plan components to allow for timber harvest for purposes other than timber production throughout the plan area, or portions of the plan area, as a tool to assist in achieving or maintaining one or more applicable desired conditions or objectives of the plan in order to protect other multiple-use values, and for salvage, sanitation, or public health or safety. Examples of using timber harvest to protect other multiple use

[12] Given that the amendment implicates the timber provisions of NFMA and the planning rule, we question whether the Forest Service is required to conduct a sustained yield calculation and analysis for the amendment.

[13] This is so because proposed Standard 3 states that "vegetation management within old growth forest conditions may not be for the primary purpose of *growing, tending, harvesting, or regeneration of trees* for economic reasons," 88 Fed. Reg. 88,047, and the rule defines "timber production" as "the purposeful *growing, tending, harvesting, and regeneration of regulated crops of trees* to be cut into logs, bolts, or other round sections for industrial or consumer use," 36 C.F.R. § 219.19 (definitions). The Forest Service may view the use of the words "primary purpose" as a means to escape implicating 36 C.F.R. § 219.11(a)(1), which does not include this limitation. Reliance on parsing this provision of the rule in this way is risky at best.

> values may include improving wildlife or fish habitat, thinning to reduce fire risk, or restoring meadow or savanna ecosystems where trees have invaded.

36 C.F.R. § 219.11(c) ("Timber harvest for purposes other than timber production"). The proposed amendment is clear that proactive management may be necessary in some forest types in order to maintain, restore, and recruit old growth forest conditions, even though these proactive actions are not undertaken "for the primary purpose" of timber production or economic recovery. 88 Fed. Reg. 88,047 (proposed Standard 3). As such, these proactive management actions fit nicely within the rule's definition of "timber harvest," which is "the removal of trees for wood fiber use *and other multiple-use purposes*." 36 C.F.R. § 219.19 (definitions) (emphasis added). In this case, "other multiple-use purposes" include those substantive provisions of the rule at 36 C.F.R. §§ 219.8, 219.9, and 219.10 (as well as those identified herein at 219.11).

Given the language of the proposed amendment, 36 C.F.R. § 219.11(c) is a substantive provision of the planning rule directly related to the amendment and should be addressed in the amendment and DEIS.

While the NOI does not identify 36 C.F.R. §§ 219.9(a)(1), 219.11(a)(1), or 219.11(c) as directly related to the amendment, this omission is harmless error because based on the emphasized amendment and rule citations supra, it appears that the Forest Service has already applied these substantive provisions of the rule to the amendment and developed new plan components accordingly. However, the procedural clarity of the amendment would be served by clearly stating in the DEIS how these provisions were considered and addressed in both the text of the proposed amendment and in the environmental analysis of it.

3. Species of Conservation Concern.

The NOI does not reference Species of Conservation Concern, which the rule defines as "a species of conservation concern is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area." 36 C.F.R. § 219.9(c). The rule goes on to explain that

> For an amendment to a plan developed or revised under a prior planning regulation, if species of conservation concern (SCC) have not been identified for the plan area and if scoping or NEPA effects analysis for the proposed amendment reveals substantial adverse impacts to a specific species, or if the proposed amendment would substantially lessen protections for a specific species, the responsible official must determine whether such species is a potential SCC, and if so, apply section § 219.9(b) with respect to that species as if it were an SCC.

36 C.F.R. § 219.13(b)(6).

In our view, designation of SCC is not required for the proposed amendment. Although many units have not designated SCC, the amendment will not *substantially lessen* protections for these species because the intent of the amendment is to *increase* habitat protections for species that

depend on old growth forests for some stages of their life histories; and for the same reasons, the effects analysis is unlikely to reveal *substantial adverse impacts to species about which there is substantial concern about the species' capability to persist over the long-term in the plan area*. Similarly, because active forest management across the remaining age classes will continue to occur including through the Wildfire Crisis Strategy, wildlife and SCC dependent on earlier successional stages will continue to have adequate habitat to persist over the long term, at least to the extent within the Forest Service's inherent authority and capability. The proposed amendments would not lessen "protections" for such species. Consequently, the rule does not implicate 36 C.F.R. § 219.13(b)(6) and the Forest Service need not designate SCC for the proposed amendment.

4. Relationship of Amendment to Existing Plan Components.

We note that the NOI states that "This proposal is not intended to replace existing direction in plans but rather to add language that provides consistency across all plans. If existing plan direction provides *more restrictive constraints on actions* that may affect existing or potential old-growth forest conditions, those more restrictive constraints would govern." 88 Fed. Reg. 88,045 (emphasis added). We believe this language and intent should be clarified in the forthcoming DEIS supporting the amendment. It is our understanding that the agency's intent is that the plan components - either those in existing plans or those added through the proposed amendment - *that provide greater benefit to old growth forests* are those that will dictate future project-level decisions. Proactive stewardship and ecocultural restoration may be necessary in some forest ecosystems, which is inconsistent with the "restrictive constraints" language in the NOI preamble.

B. Substantive Considerations.

Although the use of the direction to "determine where plan components apply" creates a great deal of confusion in the proposed amendment (in addition to representing a 2012 planning rule infirmity) as discussed below, it is our understanding that the plan components (distinctive roles and contributions, desired conditions, standards, guidelines, objectives, goals, and monitoring plan) would be immediately operable and binding on project-level decisions as soon as the nationwide amendment is final. Based on that understanding, we offer the following critique of the proposed amendment architecture and suggestions for improvement to better achieve the purpose and need of the amendment.

1. Plan Component: Distinctive Roles and Contributions.

Plan components that set forth the distinctive roles and contributions that a national forest unit or ecological characteristic serves within the larger National Forest System establishes important context and setting for other plan components and content. 36 C.F.R. §§ 219.2(b)(1), 219.7(f)(1)(ii). We support the proposed amendment text setting forth the distinctive roles and contributions that old growth forest conditions play on each local unit and across the NFS more broadly.

2. Plan Content: Goal.

The planning rule defines goals as optional plan content that are "broad statements of intent, other than desired conditions, usually related to process or interaction with the public. Goals are expressed in broad, general terms, but do not include completion dates." 36 C.F.R. § 219.7(e)(2). Goals are optional plan content, but the planning rule does require project consistency with Goals when present in plans. 36 C.F.R. § 219.15(d)(1).

While we strongly support the proposed Goal, we believe that given the content of the Goal and the intent to center Indigenous perspectives in the management of old growth trees and forests, this plan content is much better suited as a Desired Condition. As a Desired Condition, this plan content would support subsequent Standards, Guidelines, Objectives, and other plan content that also seek to elevate ecocultural restoration and co-stewardship in management of old growth trees and forests.

3. Plan Content: Management Approach.

The heart of the proposed amendment is a Management Approach that portends the collaborative development of Adaptive Strategies for Old-Growth Forest Conservation that seek to downscale old growth forest conservation and recruitment in place-based reciprocal stewardship. We support this approach in concept because it recognizes not only the role of Indigenous stewardship of old growth conditions, but also because it allows for local variation in restoration approaches that address localized ecological conditions and needs. Indeed, the local collaborative efforts many of our organizations are involved in already utilize what could be called Adaptive Strategies for Old-Growth Forest Conservation. *See infra* Section III.

While we support the intent of the Management Approach in the proposed amendment, we believe that as drafted, it is deeply flawed from both an analytical (i.e., environmental analysis) perspective as well as from a 2012 planning rule perspective. We offer the following critique and proposed solutions to address these infirmities.

Management Approaches are described in the Forest Service Handbook (FSH) as

> If used, management approaches would describe the principal strategies and program priorities the Responsible Official intends to employ to carry out projects and activities developed under the plan. The management approaches can convey a sense of priority and focus among objectives and the likely management emphasis. Management approaches should relate to desired conditions and may indicate the future course or direction of change, recognizing budget trends, program demands and accomplishments. Management approaches may discuss potential processes such as analysis, assessment, inventory, project planning, or monitoring. *Use care not to create unrealistic expectations regarding the delivery of programs*.

FSH 1909.12.22.4 (emphasis added). Management approaches are not plan components but rather optional plan content and therefore do not constrain or compel agency action in any way. 36 C.F.R. § 219.7(f)(2). Management approaches can be administratively changed with only

public notice: public comment is not required. *Id*. at § 219.13(c)(2). The proposed amendment indicates that the unit-level Adaptive Strategy will be included as an appendix to the unit's monitoring plan. 88 Fed. Reg. 88,047 (proposed Management Approach). There are a number of concerns with the structure and content of the proposed Management Approach.

First, as the FSH cautions, the Forest Service should "use caution" "not to create unrealistic expectations regarding the delivery of programs" by using management approaches. However, that is exactly what the proposed Management Approach does, because the entire proposed amendment (i.e., "delivery of programs") is based on the development and implementation of unit-level Adaptive Strategies. Because management approaches can be changed administratively without public comment, it is possible that the cornerstone of the proposed amendment can be altered or even eliminated with little Tribal and public engagement, thus compromising the expectations of Tribes and stakeholders who will extensively engage in good faith in the initial development of the Adaptive Strategy. As the Forest Service well knows, trust in the agency's ability to deliver mission critical work – including mature and old growth conservation – is low: a mercurial management approach is likely to exacerbate this situation. And, as the Forest Service is also well aware, monitoring of plan (or project) implementation is inconsistent at best: thus, placing an essential mechanism to provide for substantive MOG conservation, restoration, and recruitment in the monitoring bucket – which is already underfunded and understaffed (*see infra* Section IV) – threatens to undermine the proposed amendment's effectiveness.

Second, the structure and content of the proposed Management Approach reveals a significant analytical infirmity that may be fatal to the proposed amendment. The proposed Management Approach relies on the future development of substantive place-based Adaptive Strategies, the content of which is unknown and unknowable. While other aspects of the proposed amendment such as the proposed Standards, Guidelines, and Desired Conditions provide many parameters that may guide future project-level activities (i.e., proposed Standard 2(a)(i) – (a)(xi); proposed Guideline 1(a) – (g)), it appears that the proposed Management Approach is the mechanism by which these parameters or sideboards are integrated into place-based work on the ground. Thus, the site-specific way in which the other proposed plan components manifest on any given National Forest is unknown and unknowable until individual Adaptive Strategies are completed.

EISs "must be prepared early enough so that [they] can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made." *Save the Yaak Comm. v. Block*, 840 F.2d 714, 718 (9th Cir. 1988) (internal quotations omitted). "The phrase 'early enough' means 'at the earliest possible time to insure that planning and decisions reflect environmental values.'" *Metcalf,* 214 F.3d at 1142 (*quoting Andrus v. Sierra Club,* 442 U.S. 347, 351 (1979)). The Supreme Court has further explained that environmental impact statements "shall be prepared at the feasibility analysis (go-no go) stage and may be supplemented at a later stage if necessary." *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000).

As the Ninth Circuit has explained:

> An agency may not avoid an obligation to analyze in an EIS environmental consequences that foreseeably arise from [a programmatic decision] merely by saying that the consequences are unclear or will be analyzed later when an EA is prepared for a site-specific program proposed pursuant to the [programmatic decision]. The purpose of an [EIS] is to evaluate the possibilities in light of current and contemplated plans and to produce an informed estimate of the environmental consequences...Drafting an [EIS] necessarily involves some degree of forecasting." *City of Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975). If an agency were able to defer analysis discussion of environmental consequences in [a programmatic decision], based on a promise to perform a comparable analysis in connection with later site-specific projects, no environmental consequences would ever need to be addressed in an EIS at the [programmatic] level if comparable consequences might arise, but on a smaller scale, from a later site-specific action proposed pursuant to the [programmatic decision].
>
> Once an agency has an obligation to prepare an EIS, the scope of its analysis of environmental consequences in that EIS must be appropriate to the action in question. NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment. Rather, it is designed to require such analysis as soon as it can reasonably be done. *See Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1246 n. 9 (9th Cir.1984) ("Reasonable forecasting and speculation is...implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry,'") (*quoting Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C.Cir.1973)). If it is reasonably possible to analyze the environmental consequences in an EIS for [a programmatic decision], the agency is required to perform that analysis. The EIS analysis may be more general than a subsequent EA analysis, and it may turn out that a particular environmental consequence must be analyzed in both the [programmatic] EIS and the [site-specific] EA. But an earlier EIS analysis will not have been wasted effort, for it will guide the EA analysis and, to the extent appropriate, permit "tiering" by the EA to the [programmatic] EIS in order to avoid wasteful duplication."

Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1072 (9th Cir. 2002); *Pac. Rivers Council v. U.S. Forest Serv*., 689 F.3d 1012, 1026–27 (9th Cir. 2012); *see also* 40 C.F.R. § 1501.2 ("Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts"); *New Mexico ex rel. Richardson v. Bur. of Land Mgmt.,* 565 F.3d 683, 707–08, 716 (10th Cir.2009) (relying on *Kern* to find NEPA violation with respect to programmatic EIS). To be sure, "an agency has flexibility in deciding when to perform environmental analyses. But an environmental analysis must provide sufficient detail to foster informed decision-making, and so cannot be unreasonably postponed." *Pac. Rivers Council v. U.S. Forest Serv.*, 689 F.3d 1012, 1029 (9th Cir. 2012) (quoting *Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800 (9th Cir. 2003), *opinion clarified*, 366 F.3d 731 (9th Cir. 2004)).

Consequently, the proposed amendment has uncertain conservation benefit because it will take two years to develop each Adaptive Strategy, and even at that point, it is unknown how localized conservation, restoration, and recruitment will occur; and it is also unknown where those Strategies will apply on the ground, given that the proposed Objective only requires the Forest

Service to implement the Strategy in "one landscape" identified in the Strategy. 88 Fed. Reg. 88,047 (proposed Objective setting forth provision).

We are also concerned that without additional agency funding and staffing dedicated to implementation of the proposed amendment (*see infra* Section IV), that the Forest Service will be unable to meet the two-year deadline to prepare Adaptive Strategies for each National Forest. Likewise, there is limited Tribal and collaborator capacity to engage in the collaborative development of Adaptive Strategies on many national forests and regions, and without authentic and sustained Tribal and public engagement, the Adaptive Strategies are unlikely to meet expectations for the conservation, restoration, and recruitment of MOG trees and forests. This scenario may create a "race to the bottom" in the development of Adaptive Strategies, leading to anemic Strategies that contain few substantive provisions to achieve the intent of the Strategies envisioned in the proposed amendment.

To address this infirmity, we suggest that the Forest Service convert the proposed Management Approach to a Standard and adopt our conforming redlines, thus providing certainty to the development and implementation of Adaptive Strategies on each NFS unit.

Third, the proposed Management Approach directs that each Adaptive Strategy must, among other things, "Identify criteria used to indicate conditions where plan components will apply." 88 Fed. Reg. 88,047 (proposed Management Approach). This provision has significant planning rule and analytical infirmities that must be addressed.

The planning rule states that "...a plan amendment is required to add, modify, or remove one or more plan components, *or to change how or where one or more plan components apply to all or part of the plan area (including management areas or geographic areas)*." 36 C.F.R. § 219.13(a) (emphasis added). Because forthcoming Adaptive Strategies will determine "where plan components will apply," an additional planning/amendment process will be required once the location of the applicability of the current proposed amendment's plan components is known. Given the urgency with which President Biden has directed the Forest Service to address the biodiversity and climate crises in part through the implementation of Executive Order 14072, we do not think that society has the time to wait for the completion of another lengthy and speculative planning exercise to identify where conservation, restoration, and recruitment of MOG will occur. Nor do we believe this is the Forest Service's intention with this provision.

As with the analytical infirmity discussed supra pertaining to the development of future Adaptive Strategies with presently unknown substantive parameters, because the Forest Service does not know where on the ground amendment plan components will apply – because the Strategies themselves will "identify criteria used to indicate conditions where plan components will apply" – or the management direction contained in them (because that will be developed by Tribes and the public in collaboration with the agency), the Forest Service cannot perform a rational effects analysis of the proposed amendment. *See*, *Kern*, 284 F.3d at 1072.

To address these infirmities, we strongly suggest that the Forest Service eliminate the bullet point in the proposed Management Approach "Identify criteria used to indicate conditions where plan components will apply" and clarify in the preamble to the Federal Register notice

accompanying the release of the DEIS – and in the DEIS itself – that all of the proposed plan content and components apply across the entirety of the plan area/unit. We also strongly suggest that the Forest Service convert the proposed Management Approach to a Standard and adopt our conforming redlines clarifying the role that the provision plays within the proposed amendment's planning ecosystem.

Finally, and similar to other problematic language in the proposed Management Approach that relies on future development of Adaptive Strategies, the direction to "develop additional proactive climate-informed stewardship, conservation, and management approaches as needed to effectively achieve the desired conditions, standards, and guidelines in the amendment" has analytical infirmities that should be addressed. 88 Fed. Reg. 88,047 (proposed Management Approach). The development and presumably implementation of "additional...approaches" pertaining to MOG conservation, restoration, and recruitment suggests additional but unknown and unknowable environmental consequences and cumulative effects of the proposed amendment. Yet, NEPA requires the agency to assess these effects, placing an onerous obligation on the Forest Service. *See*, *Kern*, 284 F.3d at 1072.

To address this infirmity, we suggest that the Forest Service eliminate this bullet point from the Management Approach. The full suite of management and conservation actions permitted by the proposed amendment should be addressed in the Adaptive Strategy contemporaneously with the adoption of the amendment, which itself should be made a mandatory plan component as a Standard.

4. Plan Component: Desired Conditions.

In general, we support the intent and content of the proposed Desired Conditions associated with the proposed amendment. 88 Fed. Reg. 88,047 (proposed Desired Conditions). However, we note that the language contained in the proposed Desired Conditions largely tracks the language of 36 C.F.R. § 219.9(a)(1), Ecosystem Integrity, lending weight to our observation that this substantive provision of the rule is directly related to the amendment and should have been identified in the NOI.

We also suggest the inclusion of two additional Desired Conditions to inform the amendment. First, as discussed supra, the proposed Goal pertaining to Traditional Ecological Knowledge, Tribal sovereignty, and co-stewardship should be converted to at least a Desired Condition, commensurate with its importance. 88 Fed. Reg. 88,047 (proposed Goal). Second, we suggest that the Forest Service include the following Desired Condition:

> The Forest Service, Tribes, other governments, and public stakeholders collaboratively steward mature and old growth forest conditions for present and future generations.

We believe this additional Desired Condition better establishes the link between MOG Indigenous stewardship and the purpose, need, and intent of the amendment, and urge its inclusion.

5. Plan Component: Objectives.

The planning rule defines objectives as "a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets." 36 C.F.R. § 219.7(e)(1)(ii). While objectives are mandatory plan components, *id*., the content of the proposed Objective lacks certainty and can be improved to provide it.

We observe that the proposed Objective establishes a very low bar, requiring only a single "landscape" per unit to demonstrate improvement in old growth desired conditions *per decade*. "Landscape" is not defined in the amendment, and while the term is defined in the planning rule as "a defined area irrespective of ownership or other artificial boundaries, such as a spatial mosaic of terrestrial and aquatic ecosystems, landforms, and plant communities, repeated in similar form throughout such a defined area," 36 C.F.R. § 219.19 ("landscape"), this definition provides no numerical parameters to evaluate the extent or magnitude of the expected ecological impacts from the proposed amendment. The lack of specificity in the extent and magnitude of potential effects from the amendment is therefore an analytical infirmity that should be addressed as suggested below.

Given the urgency of the climate and biodiversity crises, this timeline is unlikely to lead to conservation benefits in the short-term, recognizing that it takes time for old growth conditions to develop over time. Moreover, because the National Forest Management Act requires forest plans to be revised not more than every 15 years, 16 U.S.C. § 1604(f)(1), and even recognizing the agency's extensive backlog of plan revisions and the congressional rider that exempts the agency from this statutory provision, many if not all national forests would already be through their planning horizons before demonstrable improvement in old growth conditions could be expected. This cannot be the agency's intended outcome of the proposed Objective.

In addition, while perhaps a worst case scenario, there is no language in the proposed Objective or elsewhere in the proposed amendment (and indeed, the references in the proposed amendment referring to successional processes increases the likelihood of such an outcome) that would preclude a responsible official line officer (or Adaptive Strategy) from identifying a "landscape" located in a Wilderness Area or other land use allocation where proactive management is precluded as the "one landscape" where "measurable improvements in old growth desired conditions" is prioritized. This scenario is inconsistent with the purpose, need, and intent of the proposed amendment, which is to proactively steward and recruit old growth trees and forests. It also disincentivizes greater application of the proposed amendment's application. This also cannot be the agency's intended outcome of the proposed Objective.

In order to address these infirmities, we suggest that the Forest Service adopt our redlines to the proposed amendment in order to better meet the purpose, need, and intent of the proposed amendment.

6. Plan Component: Standards.

Except for the exceptions discussed further below, we support the intent and narrative content of the proposed Standards, particularly Standards 1 and 2(a). 88 Fed. Reg. 88,047. Standard 2(a) requires some modification but is otherwise acceptable. And, there are several planning rule and analytical infirmities associated with the proposed Standards as written, and thus offer the following suggestions for change.

First, regarding the list of options to be promoted by proactive stewardship, 2(a)(viii) is a requirement under 36 C.F.R. § 219.9(b)(1) and 219.9(b)(2); and 2(a)(x) is a requirement under 36 C.F.R. § 219.9(a)(2). This should be made explicit in the amendment.

Second, Standard 3 states that "Vegetation management within old-growth forest conditions may not be for the primary purpose of growing, tending, harvesting, or regeneration of trees for economic reasons. Ecologically appropriate harvest is permitted in accordance with standards 1 and 2." 88 Fed. Reg. 88,047. We support the inclusion of a standard to prevent economic considerations from compromising decisions about whether to engage in a proactive stewardship activity or by what prescription. However, the qualifier "primary purpose" still allows for economics to enter into a line officer's decision making around whether to conduct vegetation management within forest demonstrating old growth forest conditions. Indeed, a line officer could go so far as to determine that a "co-equal" purpose of entering such stands included timber production and arguably not violate this proposed Standard. This is not just a hypothetical problem: Many forest plans contain a regulated, scheduled harvest program on lands suitable for timber production for multiple purposes–e.g., timber production and early successional habitat creation. Yet projects proposed under thes plans invariably tout wildlife benefits as their *primary* purpose, even though the location and prescription for treatment are influenced more by economics than enhancing wildlife habitat.

To address this shortcoming, we suggest that at a minimum the Forest Service eliminate the word "primary" from the proposed Standard as indicated in our redlines. The final amendment should make clear that while commercial tools will sometimes be appropriate to implement proactive stewardship activities or that stewardship activities may have a commercial byproduct, commercial purposes should not play a role in planning those activities.

Third, proposed Standard 3 clearly implicates several substantive provisions of the rule, specifically 36 C.F.R. §§ 219.11(a)(1)(i), 219.11(a)(1)(iii), and 219.11(c). Proposed Standard 3 tracks planning rule language defining "timber production," i.e., "the *purposeful growing, tending, harvesting, and regeneration* of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer [e.g., economic] use," 36 C.F.R. § 219.19 ("timber production"). Similarly, because proposed Standard 3 qualifies when vegetation management within forests exhibiting old growth forest conditions may occur (i.e., when it is not for the *primary* purpose of timber production *for economic reasons*), the primary purpose of such activity is "timber harvest for purposes other than timber production," which implicates 36 C.F.R. § 219.11(c) that permits timber harvest "...in order to protect other multiple-use values" such as old growth forests and the ecosystem services and ecocultural values they provide.

Consequently, the language of proposed Standard 3 lends weight to our contention that 36 C.F.R. §§ 219.11(a) and 219.11(c) are substantive provisions of the rule that should have been identified in the NOI. We reiterate, however, that the failure to identify these substantive rule provisions should be harmless error, so long as the omission is rectified in the DEIS, because it appears that the Forest Service applied those substantive provisions of the rule to the proposed amendment and developed plan components that address the requirements of the substantive provisions.

We also point out an analytical infirmity that results from the exceptions to proposed Standard 2(b) and proposed Standard 4: if a responsible official is permitted to exempt a project from proposed Standard 2 utilizing one of the exceptions in proposed Standard 2(b), or from proposed Standards 2 and 3 through application of Standard 4, then it is impossible for the Forest Service to analyze the environmental consequences of the proposed amendment because the agency cannot know where, when, or under what circumstances the provisions of proposed Standards 1, 2, or 3 will ultimately apply on the ground. Actual implementation of the proposed amendment is thus obscured at best and unknown at worse, preventing the Forest Service from conducting a rational effects analysis.

In order to address this infirmity, the agency should at the very least eliminate the exception (b)(v) in proposed Standard 2 and adopt our proposed redlines tightening exception (b)(ii).

Fourth, the exceptions to proposed Standard 2(b) are problematic from substantive and analytical perspectives. From a substantive perspective, proposed Standard 2(b)(ii) provides for an exception to the application of proposed Standard 2(a) "to protect public health and safety," a very open-ended and subjective determination. In our collective experience, we have seen nearly every single land management action – including harvest of mature and old growth trees and forests – characterized at one time or another as needed to protect public health and safety, which has had a significant detrimental effect on the public's trust of the Forest Service and its management decisions.

To be clear, we fully understand the legitimate need for actions that justifiably protect public health and safety, and thus understand the utility of this exception. However, to better address the intention behind this exception, we strongly suggest that the Forest Service better define in the proposed amendment what constitutes a public health and safety threat or risk. This could be accomplished as indicated in our redlines or through other narrative. Or, if this exception is designed, as we surmise it may be, to allow the Forest Service to cut *hazard trees* adjacent to Forest Service infrastructure to reduce the risk of treefall on the public, agency personnel, contractors, or infrastructure, then the agency should develop a more nuanced exception that addresses this specific safety hazard. Another alternative would be to simply delete this exception altogether.

Fifth, the exception in proposed Standard 2(b)(v) is extremely problematic and threatens to swallow the entire amendment. That exception allows the responsible official to exempt a project from proposed Standard 1 and 2(a) "in cases where it is determined that the direction in this amendment is not relevant or beneficial to a particular forest ecosystem type." 88 Fed. Reg. 88,407 (proposed Standard 2(b)). This exception vests the responsible official with open ended flexibility to simply decide, in their sole discretion, that Standards 1 and 2(a) – the heart of the

amendment – don't apply to a particular project. The requirement to document that rationale in the decision document in no way constrains the underlying decision and fails to provide any accountability for it. We can conceive of no situation in which such a rationale would have a basis in Indigenous or western science, further undermining the exception.

We also note that because the use of this exception is without limitation, the Forest Service must analyze the ecological consequences of responsible official routine and frequent use of the exception, because the agency cannot expect it to be used only infrequently. Said another way, it will be very difficult if not impossible for the Forest Service to conduct a rational effects analysis if the agency does not and cannot know where proposed Standards 1 and 2(a) always will be implemented and where and when they will only be followed sometimes.

To address these substantive and analytical infirmities, we suggest in the strongest of terms that the Forest Service eliminate the exception at proposed Standard 2(b)(v).

7. Plan Component: Guideline.

The proposed amendment contains a single proposed Guideline that serves to do much of the substantive conservation and recruitment work of the proposed amendment. 88 Fed. Reg. 88,407-08 (proposed Guideline). While we support the intent of this proposed Guideline, particularly the purposes that proactive stewardship activities should meet that are identified in 1(a) – 1(g), we note an important analytical infirmity that should be addressed in the final amendment.

As a guideline, the responsible official may depart from the terms of the guideline so far as the intent of the provision is met. 36 C.F.R. § 219.7(e)(1)(iv). The intent of the proposed Guideline is quite clear (i.e., increase the amount, distribution, resilience of old growth forest conditions). Less clear is where it applies: the amendment language states that it will apply in areas that do not currently meet old growth forest conditions that will be later identified in an Adaptive Strategy. 88 Fed. Reg. 88,407-08. However, as a guideline where departure is permitted, and because it is unknown where any given Adaptive Strategy[14] will apply on the ground and at what scale (because "landscape" is not defined by acreage or other numerical parameter) and in what way (i.e., how, in the event of departure, the intent of the proposed Guideline will be met), then the agency has a very difficult if not impossible analytical obligation indeed.

In addition, while we appreciate the reference to the Adaptive Strategy in this Guideline that has the effect of making the otherwise unenforceable Management Approach relevant to management decisions, we note that the Guideline as written only applies where a unit's Adaptive Strategy has prioritized a landscape for recruitment of OG forests conditions where those conditions are not already present. As discussed above, the planning rule does not permit the agency to defer to the Adaptive Strategy the identification of areas where plan components apply. 36 C.F.R. § 219.13. In addition, focusing only on one landscape for the recruitment of OG forest conditions is unlikely to result in improved amount, distribution, representativeness,

[14] Although the reference to optional plan content (i.e., the proposed Management Approach that directs the development of Adaptive Strategies) helps elevate the importance of optional plan content, it does not convert the proposed Management Approach to plan components that assure its implementation.

redundancy, resilience, and connectivity of old growth forests across the NFS as the proposed amendment intends. If we are to increase the amount, distribution, representativeness, redundancy, resilience, and connectivity of old growth forests, we must draw from the next younger age class.

To address these substantive and analytical infirmities, we suggest that the Forest Service convert this proposed Guideline to a Standard and adopt our conforming redlines.

8. Plan Content: Plan Monitoring.

Our organizations strongly support monitoring and adaptive management to inform the conservation, restoration, and recruitment of MOG forests, and therefore were pleased to see the proposed Plan Monitoring provisions in the proposed amendment. 88 Fed. Reg. 88,408 (proposed Plan Monitoring). Complementing these provisions, we point the Forest Service to the comments submitted by some of our organizations on the agency's proposed Forest Service Manual Chapter 2040 that are designed to bolster robust monitoring and adaptive management in planning. We offer the following feedback to improve the proposed Plan Monitoring plan content.

First, we note that the use of the word "Network" in the proposed Plan Monitoring provision is confusing and may suggest to some that MOG forests are somehow static on the landscape and otherwise part of a "network" of land use allocations or "protected" areas similar to the Late-Successional Reserve *network* in the Northwest Forest Plan region, the future old-growth network in the revised Nantahala & Pisgah plan, or the Wilderness Area *network*. Instead, we suggest that a different word choice such as "Program" may better capture the intent of this provision.

Second, we urge the Forest Service to amend this provision to explicitly include third parties such as Tribes, non-governmental entities, states, and other willing partners who are in the position to leverage their capacity to assist the Forest Service in its monitoring obligations. We urge the agency to adopt our redline changes to the proposed Plan Monitoring provision to better reflect the opportunity to engage collaborative partners in monitoring of the proposed amendment.

Third, we reiterate our oft-expressed concern that the Forest Service's capacity for monitoring historically has been limited at best and is often the last activity funded and the first eliminated when funding falls short. Indeed, based on information obtained through the Freedom of Information Act, it appears that very few national forests have regularly conducted biennial plan monitoring as required by the 2012 planning rule, and that on average, the last time forests prepared a publicly-available monitoring report was 2015.

Given that it is essential that the public and land managers know whether the proposed amendment is meeting expectations, it will also be essential that the proposed Plan Monitoring actually occurs and is used to inform ongoing and future land management actions pertaining to MOG conservation, restoration, and recruitment. This need further bolsters our suggestion infra

Section IV that a significant increased investment in monitoring and adaptive management efforts is necessary to support the proposed amendment.

Fourth, as our comments supra explain, proposed amendment language suggests that the proposed amendment does not apply across the entire NFS and that future plan-level decisions to be disclosed in monitoring reports will determine "where plan components will apply." This is extremely problematic and gives rise to both an analytical infirmity as well as a likely planning rule violation. It is inappropriate for *plan monitoring* to determine where plan components and content apply: instead, the proposed amendment must make this determination as an initial matter.

To address these concerns, we recommend that the Forest Service eliminate the proposed Plan Monitoring provision 1 and adopt our conforming redlines that tighten the expectations around monitoring.

We request the Forest Service to include a provision in its monitoring section to monitor trends in abundance and distribution for selected focal species (as defined in 36 C.F.R. § 219.19) as key indicators of changes in the amount, distribution, representativeness, redundancy, resilience, and connectivity of old growth conditions as the result of proactive stewardship and natural disturbance. Changes in focal species abundance and distribution trends should trigger assessments of management practices and adaptations, when necessary, to achieve desired old growth ecological conditions.

III. Alternatives to the Preferred Action.

Our technical comments outline areas for improvement for the Forest Service's preferred alternative, i.e., the proposed amendment contained in the NOI. While we believe that the proposed amendment *as amended based on our feedback* can be implemented and can achieve the desired outcomes, we also suggest other alternative approaches that may better achieve those outcomes.

Attached to our comments are alternative formulations of plan amendment plan components and content that achieves the objectives of conserving, restoring, and recruiting old growth trees and forests. We offer these alternatives to the Forest Service's proposed alternative to assist the agency in developing alternatives for the forthcoming DEIS, and specifically ask that the agency include Alternative C, or a modified version of it, in the range of alternatives it considers.

IV. Examples of Collaborative Conservation Strategy Implementation.

We appreciate the use of the 2012 planning rule to effectuate mature and old growth forest conservation, restoration, and recruitment, and while we have identified concerns and infirmities with the agency's preferred approach outlined in the proposed amendment, we believe that there are current examples of how some aspects of the proposed amendment are already working in practice, which can inform changes to the preferred action.

For example, the Blue Mountains Forest Partners on the Malheur National Forest in eastern Oregon have collaboratively developed a suite of Zones of Agreement (ZOAs) that provide specific management prescriptions and approaches to not only wildfire risk reduction activities, but also older forest conservation strategies. In particular, the *Upland Forest Zones of Agreement* utilize proactive restoration strategies based on peer-reviewed scientific principles put forth by Franklin, Johnson, and Van Pelt (2012)[15] and Franklin et al. (2013)[16] that begin with protecting all *old* trees in a stand from harvest and building proactive restoration strategies that alter stand density, structure, and composition around the conservation of legacy structure (i.e., old trees). These approaches also include the robust and repeated reintroduction of fire to complete restoration treatments. BMFP's Zones of Agreement have been adopted into the Southern Blues Restoration Coalition Collaborative Forest Landscape Restoration Project as well.

Moreover, these restoration strategies contribute to local economic development and have resulted in the continued operation of the last mill in the wood basket, creating sufficient certainty to allow other restoration and wood products infrastructure to *add* local capacity. This, in turn, has created and sustained a sufficient workforce to achieve the desired conditions collaboratively developed and established in the Zones of Agreement.

These ZOAs are similar to the proposed Management Approach and Adaptive Strategy in the proposed amendment, and the specific proactive restoration prescriptions are akin to proposed Standards 1, 2(a), and 3 and the proposed Guideline. BMFP annually collects specific data on the trends of old growth conditions on the Malheur, which is consistent with and answers the questions posed in the proposed Plan Monitoring in the proposed amendment. Taken together, the ZOAs meet the proposed Desired Conditions and Goal as well.

Second, on the Okanogan-Wenatchee National Forest in north central Washington, Forest Service partnered with the local PNW Research Station to develop the 2012 Okanogan-Wenatchee Restoration Strategy to increase management pace, scale, efficiency and effectiveness as climate change impacts bear down. Not a forest plan per se but rather a logical stepwise framework for evaluating, integrating, and prioritizing landscape restoration actions. The Strategy provides the scientific rationale for restoration actions, defines terms, identifies relevant policy, and lays out the process for landscape evaluation factoring departure from historic and reference conditions, wildlife habitat distribution and conditions, habitat sustainability over time, aquatic habitat conditions, roads and access management, drought, fire flow, and other natural resource information. The product is an integrated landscape prescription, which identifies specific discrete treatment areas for multiple objectives, and a purpose and need statement for NEPA review. In addition, the Strategy describes monitoring and other steps to implement an adaptive approach to restoration. The Forest is currently updating the Strategy to reflect recommendations from a scientific and administrative review, funded by the local collaborative, of lessons and knowledge gained over the last decade.

[15] Franklin, J. F. and K. N. Johnson. 2012. A restoration framework for federal forests in the Pacific Northwest. Journal of Forestry 110(8):429-439.
[16] Franklin, J. F., Johnson, K. N., Churchill, D. J., Hagmann, K., Johnson, D., & Johnston, J. (2013). Restoration of dry forests in eastern Oregon: a field guide. The Nature Conservancy, Portland, OR.

Although the Strategy enjoyed widespread stakeholder support, Forest Service implementation of the Strategy has been uneven and hampered by perpetual leadership change. However, the Strategy's core concepts – address new science and management direction and adapt to climate change; provide a consistent definition and integrated approach to forest restoration; increase the restoration footprint through a process that identifies high priority, strategic treatment areas; improve planning and project efficiency; and improve outcomes through monitoring and adaptive management – are sound. Indeed, this kind of approach – neither a forest plan nor a site-specific project – is an excellent example of how mid-scale programmatic analysis and planning can result in efficiencies in project implementation. Like the BMFP's ZOAs discussed supra, the elements of the Okanogan-Wenatchee Restoration Strategy are consistent with the approach outlined in the proposed amendment.

Third, in the Southwest, ZOAs created almost 20 years ago have provided a foundation for successful collaborative fuel reduction that prioritizes the maintenance and increase in old growth forests. In 2006, a wide range of groups including federal and state interests and nongovernmental organizations came together to codify their zones of agreement in the *New Mexico Forest Restoration Principles*. These ZOAs included an emphasis on the restoration of ecosystem composition, maintenance of watershed and soil integrity, and notably in this context, preservation of old or large trees while maintaining structural diversity and resilience. The *Restoration Principles* have been the bedrock for the Southwest Jemez, Zuni Mountain, and Rio Chama Collaborative Forest Landscape Restoration Projects, as well as numerous other efforts such as the Santa Fe Fireshed Coalition. Though there are still occasional disagreements about projects or implementation, the *Restoration Principles* have helped keep collaborators at the table and working through details within a well-established ZOA.

Fourth, on the Pike-San Isabel and Arapaho-Roosevelt National Forests, a group of scientists and managers participating as stakeholders in the Colorado Front Range Collaborative Forest Landscape Restoration Project came together to produce a shared quantitative vision for restoration on these two forests, including principles and practices to guide restoration at both stand and landscape scales. To add to its rigor and enhance its credibility, the group published their findings as a General Technical Report through the Rocky Mountain Research Station. Today, the GTR is being used by both forests to guide fuel treatment and other vegetation management projects in dry, mixed-conifer forests – proof that stakeholders can come together to design and implement restoration treatments to restore old-growth structure and composition.

V. Recommendations for Supplemental Policies and Changes to Agency Capacity to Support Implementation of the Proposed Amendment.

The purpose of the proposed national amendment is "to include consistent direction to conserve and steward existing and recruit future old-growth forest conditions and to monitor their condition across planning areas of the National Forest System. The intent is to foster the long-term resilience of old growth forest conditions and their contributions to ecological integrity across the National Forest System." Forest Service, *Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System, Notice of Intent to Prepare an Environmental Impact Statement*, 88 FED. REG. 88,042 (Dec. 20, 2023). As discussed supra, our organizations strongly support this objective. To best ensure that the purpose of the amendment

is achieved in implementation, additional supporting policies and changes to agency capacity are necessary. We recommend the following suite of measures to facilitate the implementation of the proposed amendment.

A. National Land Management Planning Consistency Oversight and Accountability Process/Program.

The Forest Service's 2012 planning rule is an innovative framework for the development, revision, and amendment of land management plans, but in some ways has not met the high expectations its drafters and the public expected of the rule. Given the proposed national MOG amendment, other high-profile amendment efforts such as the climate-smart forestry amendment for the Northwest Forest Plan and the Tongass National Forest, and the backlog of forest plans requiring revision, it is essential that the Forest Service take the opportunity now to implement the rule's requirement that the agency establish and administer a national oversight process for accountability and consistency of NFS land management planning.[17] 36 C.F.R. § 219.2(b)(5)(ii).

The Forest Service could also establish a National Land Management Planning Consistency Oversight and Accountability *Program*, in addition to establishing and administering a national oversight *process* for accountability and consistency of NFS land management planning. Given that the proposed amendment includes monitoring and adaptive management provisions that seek to evaluate progress towards desired ecological conditions across the entire NFS, creating such a Program is a logical step to ensure the success of the amendment.

As a new program and/or process, new dedicated funding and staff would be required to implement this option.

B. Field Verification of MOG Inventory.

The Forest Service's MOG DEFINITION TECHNICAL REPORT and Mature and Old Growth Forest Threat Assessment provide an inventory of mature and old growth forests across the NFS that is admittedly coarse-scale. However, to effectively implement the proposed amendment, collaborative strategies, monitoring, and adaptive management, the Forest Service will need a much more refined inventory of mature and old growth forests on each individual national forest unit. Until a better inventory is available and perhaps even longer, the agency will need a way to identify, at the project level, old-growth conditions and opportunities to promote old-growth conditions in mature forests. We recommend that the agency – with the assistance of willing partners and Tribes – immediately begin field verification of the existing inventory with the goal

[17] As a part of that process, the Forest Service could establish a federal advisory committee to assist the agency in meeting this regulatory requirement by offering recommendations on: 1) implementation of the planning rule, based on lessons learned and best practices from on-going or completed assessments, revisions, and monitoring strategies; 2) new best practices that could be implemented based on lessons learned; 3) consistent interpretation of the rule where ambiguities cause difficulty in implementation of the rule; 4) effective ongoing monitoring and evaluation, including broad scale monitoring, for implementation of the planning rule; 5) how to foster an effective ongoing collaborative framework to ensure engagement of federal, state, local and Tribal governments; private organizations and affected interests; the scientific community; and other stakeholders; and 6) integrating the land management planning process with landscape scale restoration activities through implementation of the planning rule, among other functions. This advisory committee could be appointed in the second Biden administration.

of refining it to the relevant implementation scale, which may vary depending on the ecological community and relevant management history. This refined inventory will be essential to focus the restoration, recruitment, and management of mature and old growth forests as required by the proposed amendment.

C. Appoint a Committee of Scientists to Address Mature Forest Management.

The proposed amendment and preamble are focused on the conservation and stewardship of old growth forests, although both refer to the "recruitment" of old forests through forest succession and/or management, which necessarily implicates the management and recruitment of mature forests. In comments on the Forest Service's advanced notice of proposed rulemaking (ANPR), our organizations suggested that the agency consider the management approach proposed by the Connecticut Department of Energy and Environmental Protection, Division of Forestry in its response to the Forest Service's request for information that preceded the ANPR.[18] There, the Division of Forestry suggested splitting mature forests from old growth forests, and managing each "bin" as follows:

- Old-growth forest passively managed.
- Old-growth forest actively managed to maintain old-growth characteristics.
- Mature forest passively managed to create old-growth forest.
- Mature forest actively managed to create old-growth forest.
- Mature forest actively managed to create other conditions such as young forest.

We recognize that conservation of mature forests is more challenging, both ecologically and sociopolitically. Using the approach proposed by the Connecticut Division of Forestry as a guide, the Forest Service could rank mature forests based on their maturity (based on structural complexity, management legacies, age, and stage of succession) and the comparable ecological benefits and services of each mature forest bin, such as water provision, biodiversity, carbon storage potential, etc.[19] Under this approach, the Forest Service would prioritize the mature forests that should be managed to become old growth (via passive or active management) primarily by identifying those mature forests with the greatest potential ecological value (including in a climate-constrained world) along those various criteria/factors, while balancing other relevant factors (economic, social, etc.) as needed. Each mature forest bin could then be managed based on desired ecological outcomes and the need to ensure "sufficient" (based on the NRV of sustainable mature forest cover as defined in the MOG DEFINITION TECHNICAL REPORT) mature forest on each national forest over time, taking into account the conversion of both mature and old forest to early successional conditions as the result of natural disturbance processes.

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[18] *See* State Responses to Request for Information on Federal Old-Growth and Mature Forests, 12-14 (comments of Connecticut Department of Energy and Environmental Protection, Division of Forestry) (2022).

[19] There are several methods worth considering for binning mature forests: (a) mature forests with additional conservation values, which could be delineated spatially based on available measures of ecological integrity; (b) mature forests with relatively high stability (low climate velocity); (c) older mature forests defined by age or structural characteristics; and (d) mature forests in administrative units where mature and old-growth forests, combined, are underrepresented for the relevant forest type(s). Use of the Forest Service's Climate Risk Viewer and the multi-variate analysis undertaken by the Pew Charitable Trusts and Conservation Science Partners would bolster the agency's assessment of in which bin mature forests would be placed and how those forests would be managed.

While we believe that this approach is a viable mature forest management pathway worth exploring, there are other science-driven approaches to address the management of mature forests. The Forest Service/USDA could appoint (and fully fund and staff) a Committee of Scientists (COS) as it did to inform the promulgation of the 1982 and 2000 planning rules with the charge of conducting an HRV/FRV analysis of mature forest types that have been identified in the MOG DEFINITION TECHNICAL REPORT and developing management options for mature forests across the species composition spectrum. The COS could include both federal, nonfederal, and academic experts from multiple disciplines relevant to the inquiry. This COS process should not preclude the development of a policy *framework* in which the scientific recommendations from the COS would be embedded.

Developing viable science-based mature forest management approaches is essential to successful conservation strategies pertaining to old growth forests: if we are unable to maintain, restore, and recruit mature forests based on the best available western and Indigenous science, we will be unable to do so for old growth forests as well. Therefore, the Forest Service must embark on developing science-based mature forest management approaches and policies as it implements the proposed old growth forest amendment.

D. Increase Agency Funding and Capacity.

The proposed amendment envisions robust collaboration with public stakeholders, Government-to-Government consultation with Tribes, monitoring, and adaptive management. In order to achieve the desired outcomes of the amendment, the Forest Service will need to increase funding and staffing of key program areas. Our organizations support the needed capacity outlined below and look forward to working with the agency and Congress to provide the necessary resources.

First, the Forest Service should increase the capacity of the Office of Tribal Relations. Given that the proposed rule requires the integration of western and Indigenous knowledge to inform old growth forest management and recruitment, the Forest Service will need additional personnel to engage Tribes and Alaska Native Corporations in effective stewardship. Existing staff are already stretched thin addressing existing and ongoing initiatives: additional capacity will be necessary to address the additional workload stemming from implementation of the proposed amendment.

Second, the Forest Service should increase the capacity of the Community Capacity and Land Stewardship Program administered by the National Forest Foundation. The proposed amendment requires the collaborative development of Adaptive Strategies for Old-Growth Forest Conservation and landscape-level proactive stewardship activities to achieve the desired conditions established by the amendment, which by definition will require collaboration with the public, Tribes, and other stakeholders. Much like funding for monitoring, funding for collaborative activities is extremely scarce or nonexistent in some landscapes and has been woefully underfunded in recent years. The stepped-down collaboration required by the amendment will require additional and robust funding and staff capacity if the amendment is to be successful.

Third, the Forest Service should increase the capacity of the Ecosystem Management Coordination program and staff, specifically through the Land Management Planning, Assessment, and Monitoring budget line item. The proposed amendment requires robust monitoring and adaptive management to a degree and extent that may be unprecedented. In our experience, monitoring is the last activity funded and the first one eliminated when belts are tightened.[20] However, the plan monitoring of the trends of old growth forest abundance, representation, redundancy, connectivity, composition, structure, and pattern is a key aspect of the amendment and something in which our organizations are keenly interested, as are other stakeholders and Tribes. If the amendment is to be successful and socially acceptable, the Forest Service will need to demonstrate that it is able to track these trends over time and adapt[21] if trends warrant, and that will only occur if the agency has adequate capacity to do so.

In addition to the Interagency Regional Monitoring Program associated with the Northwest Forest Plan, we note that the Collaborative Forest Landscape Restoration Program (CFLRP) requires annual monitoring (and post-project monitoring for 5 years) of recently standardized biophysical and socioeconomic indicators. Most CFLRP landscapes are highly functional and nearly all forest collaboratives are interested in the status, condition, and trends of older forests within their CFLRP landscapes, given that restoration prescriptions are designed to maintain and restore ecological integrity including functional older forest ecosystems. Therefore, we suggest that the Forest Service may want to include optional monitoring questions pertaining to mature and old growth forest maintenance, restoration, and recruitment in the standardized CFLRP monitoring questions to ascertain additional information from these CFLR projects.

E. Timber Country Just Transition.

We recognize that the proposed amendment will curtail the harvest of old growth forests, which we believe is ecologically and socioeconomically well-justified in light of the climate and biodiversity crises. We also recognize that the harvest of some mature forests may be curtailed so that old growth forests may be recruited over time from mature successional stages. While we understand that commercial timber harvest of old growth and the oldest mature forests is a relatively small component of the Forest Service's timber sale program nationwide, we also recognize that some communities may be unevenly economically affected by implementation of the proposed amendment.[22]

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[20] An exception may be the Interagency Regional Monitoring Program associated with the Northwest Forest Plan. As a result of this systemic and regular monitoring, the Forest Service has been able to prioritize amendments to the Northwest Forest Plan with robust biophysical and socioeconomic data. This is a model of monitoring data collection and utilization and should be continued.

[21] Many of our organizations provided comments on the Forest Service's proposed Forest Service Manual Chapter 2040 and recommended that the agency use this new chapter to better proscribe adaptive management triggers and monitoring protocols, particularly given this proposed amendment that requires changes in forest management if the amendment is not producing the desired conditions. These policy changes are clearly linked and related, and should be harmonized across the NFS.

[22] However, it would be inappropriate to frame the issues of mature and old growth forest conservation, climate adaptation, or climate resilience as matters of economy vs. environmental integrity. Healthy forests yield significant economic benefits related to use and non-use values, and the real costs of inaction on climate mitigation and adaptation become more apparent every day. Moreover, some strategies to accelerate the development of old-growth forest or enhance climate resilience will still require targeted thinning of small-diameter trees, which can present

Consequently, the Forest Service should develop a comprehensive strategy to ensure a "just transition"[23] for forest workers and timber-dependent communities. Although typically applied in the context of energy and industry, it is equally relevant here. Achieving this goal will require ample opportunities for input and collaboration by affected communities and those adjacent to NFS units. It will be virtually impossible to resolve disputes and disagreements around resource management without opportunities for collaboration and credible representation of the interests of affected stakeholders.[24]

The Forest Service has experience with these types of efforts: both the Southeast Alaska Sustainability Strategy and the Northwest Forest Plan's Northwest Economic Adjustment Initiative[25] were designed to provide economic assistance to communities affected by changes in federal forest management. The agency should tap into the unprecedented congressional investment in Forest Service land management activities and rural communities through the Infrastructure Investment and Jobs Act and Inflation Reduction Act to at least partially fund this timber country just transition.

F. Continued Implementation of the Wildfire Crisis Strategy.

We have noted the criticism from some stakeholders that the Forest Service's proposed old growth amendment is a "distraction" from more mission-critical work, particularly implementation of the Wildfire Crisis Strategy. We strongly disagree with this assessment, and acknowledge that as a multiple-use agency, the Forest Service can – and, indeed, is legally obligated to – both conserve irreplaceable forest resources (i.e., mature and old growth forests) and manage the NFS to reduce wildfire risk to natural resources and human communities. Indeed, the proposed amendment recognizes that proactive stewardship activities are necessary to maintain, restore, and recruit old growth forests over time and to reduce stressors and threats to these forests. To that end, by providing direction for the restoration of forest health and ecological integrity, we believe that the proposed amendment is complementary and consistent with the Wildfire Crisis Strategy and acknowledge that the Forest Service will continue to implement the Wildfire Crisis Strategy and related hazardous fuels reduction activities regardless of the proposed old growth amendment.

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new economic opportunities for adjacent communities, and can help to reduce domestic dependence on imported wood products, such as oriented strand board, from countries with far less rigorous forest management standards.

[23] According to the International Labour Organization, "A Just Transition means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. A Just Transition involves maximizing the social and economic opportunities of climate action, while minimizing and carefully managing any challenges – including through effective social dialogue among all groups impacted, and respect for fundamental labour principles and rights."

[24] See Wondolleck, J. (2009). Old Growth: Evolution of an Intractable Conflict. In Spies, T. A., & Duncan, S. L. (Eds.). *Old growth in a New World: a Pacific Northwest icon reexamined* (pp. 177-185). Island Press.

[25] Unfortunately, the NEAI was never fully funded by either the Clinton or Bush administrations, leading to significant rural disillusion that persists today. Michael C. Blumm et. al., *The World's Largest Ecosystem Management Plan: The Northwest Forest Plan After a Quarter-Century*, 52 ENVTL. L. 151, 181–84 (2022). The Forest Service cannot repeat this mistake with the proposed amendment.

VI. Conclusion.

Thank you for the opportunity to provide comments in response to the Forest Service's proposed national old growth forest plan amendment. We look forward to working with you to conserve and restore mature and old growth forests and ecological integrity across the National Forest System. If you have any questions about these comments, please contact Susan Jane Brown at sjb@silvix.org or 503-680-5513.

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Proposed Amendment Redlines

Statement of Distinctive Roles and Contributions—

The National Forest System plays a distinctive and key role in providing the nation with benefits related to national forests and grasslands within the broader landscape, including old-growth forest conditions. Old-growth forest~~s~~ conditions, ~~are dynamic systems~~ which are distinguished by old trees and related structural attributes, are an important part of dynamic forested ecosystems. Old growth typically differs from other stages of stand development in a variety of characteristics, including the presence of old trees, variability in canopy structure, patchiness, and development pathways depending on disturbance regimes and resulting patterns. The structure and composition of old-growth forests is highly place-based and can range from old, multi-layered temperate coniferous forests with high amounts of dead wood in the form of standing snags and coarse wood to old, single-storied pine forests or oak woodlands with open canopy structure and fire-maintained herb and litter dominated understories, to all-aged mesic hardwood forests regenerated primarily through gap-phase dynamics and characterized by large woody debris and tip-up mounds.

Healthy o~~O~~ld-growth forest conditions, particularly when present in a sufficient quantity and distribution and with adequate connectivity, support ecological integrity and contribute to distinctive ecosystem services—such as long-term storage of carbon, increased biodiversity, improved watershed health, and social, cultural, and economic values. Old-growth forests have place-based meanings tied to cultural identity and heritage; local economies and ways of life; traditional and subsistence uses; aesthetic, spiritual, and recreational experiences; and Tribal and Indigenous histories, cultures, and practices. For millennia, Tribal and Indigenous practices have maintained resilient forest structure and composition of forests that harbor high structural and compositional diversity, with particular emphasis on understory plants and fire-dependent wildlife habitat.

Goal—

1. Interpretation and implementation is grounded in recognition and respect of tribal sovereignty, treaties, Indigenous Knowledge and the ethic of reciprocity and responsibility

to future generations. Implementation should enable co-stewardship, including for cultural burning, prescribed fire, and other activities, and should occur in consultation with Tribes and Alaska Native Corporations to fulfill treaty obligations and general trust responsibilities.

Management Approach—

1 *Adaptive Strategy for Old-Growth Forest Conservation:*

a) Within two years, in consultation with Tribes and Alaska Native Corporations and in collaboration with States, local governments, industry partners, and public stakeholders, create or adopt an *Adaptive Strategy for Old-Growth Forest Conservation* based on geographically relevant data or information to:

- Effectively braid place-based Indigenous Knowledge and Western science to inform and prioritize the conservation and recruitment of old-growth forest conditions through proactive stewardship.
- ~~Identify criteria used to indicate conditions where plan components will apply.~~
- Identify and p~~P~~rioritize areas for the retention and promotion of old-growth forest conditions, based on threats, stressors, and opportunities relevant to the plan area.
- Establish target milestones for management specific to the plan area, to support progress toward the desired conditions of this amendment.
- ~~Develop additional proactive climate-informed stewardship, conservation, and management approaches as needed to effectively achieve the desired conditions, standards, and guidelines in the amendment.~~
- Identify a program of work and partnerships that can support effective delivery of the plan monitoring requirements to inform adaptive management.
- Provide geographically relevant information about threats, stressors, and management opportunities relevant to the ecosystem of the plan area to facilitate effective implementation.

b) One or more units may create a joint *Adaptive Strategy for Old-Growth Forest Conservation*. An already existing strategy or other document may also be used if it meets this intent and contains, or is amended to contain, all substantive elements described in 1(a).

c) Include the *Adaptive Strategy for Old-Growth Forest Conservation* as an appendix to either the broader scale monitoring strategy or the biennial monitoring report, see 36 CFR 219.12. Units should use this strategy to inform priorities. The strategy may be periodically updated (36 CFR 219.13(c)) to reflect new information and monitoring results.

Desired Conditions—

1. The amount and distribution of old-growth forest conditions are maintained and improved relative to current trends ~~the existing condition over time~~, recognizing that old-growth forest conditions are dynamic in nature and shift on the landscape over time as a result of succession and disturbance.
2. Proactive stewardship, including for retention and recruitment, along with natural succession, foster an increasing trend in the amount, representativeness, redundancy, and connectivity of old-growth forest conditions such that future conditions are within or approaching the natural range of variation, resilient, and adaptable to stressors and likely future environments.
3. Carbon stored in old-growth conditions contributes to the long-term carbon storage, stability, and resiliency of forest carbon across the National Forest System.
4. The long-term abundance, distribution, and resiliency of old-growth conditions contribute to the overall ecological integrity of terrestrial and aquatic ecosystems ~~and watersheds~~.

Objective—

1. Within ten years~~, at~~ the unit ~~level, at least one landscape prioritized within an *Adaptive Strategy for Old-Growth Forest Conservation*~~ will exhibit measurable improvements in old growth desired conditions as a result of retention, recruitment, and proactive stewardship

activities and natural succession.

2. Permit no loss of old growth trees from timber production during the planning cycle.
3. During the planning cycle, active and passive stewardship of old growth trees will stabilize or increase populations of old growth trees that are in decline from stressors including but not limited to uncharacteristic extent and severity of fire, insect attack, disease, and drought stress.
4. Within 2 years, working in partnership with Tribes, other governments, and public stakeholders, collaboratively develop *Adaptive Strategies for Old-Growth Forest Conservation* for the management of old growth trees, consistent with existing law and treaty rights. A*daptive Strategies for Old-Growth Forest Conservation* shall be consistent with these amended plan components. *Adaptive Strategies for Old-Growth Forest Conservation* shall utilize the best available science (including Indigenous Knowledge) in identifying old growth trees and describing the causes and consequences of trends in old growth trees, making use of existing maps, inventories, or science findings. *Adaptive Strategies for Old-Growth Forest Conservation* may involve or necessitate the preparation of new data and information.
5. Within 2 years and in order to inform project-level analysis, develop and implement Forest-level geospatial data management and adaptive management planning to track the status and trends of different age classes of trees over the planning horizon and beyond in a manner that is compatible with the National Old-Growth Monitoring Network.

Standards for Management Actions within Old-Growth Forest Conditions—

1. Vegetation management activities must not degrade or impair the composition, structure, or ecological processes in a manner that ~~prevents~~ precludes an increasing trend in the long-term persistence of old-growth forest conditions within the plan area.
2. a) Vegetation management in old-growth forest conditions must be for the purpose of proactive stewardship, to promote the composition, structure, pattern, or ecological processes necessary for the old-growth forest conditions to be resilient and adaptable to

stressors and likely future environments. Proactive stewardship activities shall promote one or more of the following:

i. amount, density and distribution of old trees, downed logs, and standing snags;

ii. vertical and horizontal distribution of old-growth structures, including canopy structure;

iii. patch size characteristics, percentage or proportion of forest interior, and connectivity;

iv. types, frequencies, severities, patch sizes, extent, and spatial patterns of disturbances;

v. return of characteristic ~~appropriate~~ fire disturbance regimes and conditions;

vi. successional pathways and stand development;

vii. connectivity and the ability of native species associated with the old-growth conditions to move through the area and cross into adjacent areas;

viii. ~~ecological conditions for at-risk species associated with old-growth forest conditions~~;

ix. the presence of key understory species or culturally significant species or values;

x. ~~species diversity, and presence and abundance of rare and unique habitat types associated with old-growth forest conditions;~~ or

xi. other key characteristics of ecological integrity associated with old-growth conditions.

b) Exceptions to this standard may be allowed ~~if the responsible official determines~~ where the best available science, including Indigenous science, indicates that actions are necessary:

i. to reduce fuel hazards on National Forest System land within the wildland-urban interface to protect a community or infrastructure from wildfire;

~~ii. to protect public health and safety;~~

ii. to protect public health and safety after a declared emergency or to remove individual hazard trees along Maintenance Level 2, 3, 4, or 5 roads;

iii. to comply with other statutes or regulations;

iv. for culturally significant uses; or

~~v. in cases where it is determined that the direction in this amendment is not relevant or beneficial to a particular forest ecosystem type.~~

In granting an exception, the responsible official must include the rationale in a decision document.

3. Vegetation management within old-growth forest conditions may not be for the ~~primary~~ purpose of growing, tending, harvesting, or regeneration of trees for economic reasons. Ecologically appropriate harvest is permitted in accordance with standards 1 and 2.
4. Exceptions to standards 2 and 3 may be granted by the Regional Forester in Alaska if necessary to allow for implementation of the Southeast Alaska Sustainability Strategy and the rationale must be included in a decision document.

~~Guideline~~

Standards for Management Actions Outside of Old-Growth Forest Conditions~~–~~

1. This standard ~~guideline~~ is intended to increase amounts and improve distributions and climate resilience of future old-growth forest conditions. It applies to areas that do not currently meet old-growth definitional conditions ~~but that have been identified in the *Adaptive Strategy for Old-Growth Forest Conservation* as a priority for the future contribution of the development of those conditions over time~~.

   For the purposes of fostering an increasing trend in the amount, representativeness, redundancy, and connectivity of old-growth forest conditions and ensure that future conditions will be resilient and adaptable to stressors and likely future environments, landscape-level proactive stewardship activities should, within the scope of meeting other desired conditions, and characteristic of the ecosystem, be developed for the following priorities and purposes:

   a) To provide landscape-level redundancy and representation of old-growth conditions such that loss due to natural disturbance events does not result in a loss or isolation of the old-growth conditions at the landscape scale.

b) To retain and promote the development of resilient old-growth conditions adjacent to existing old-growth forest conditions, including for the purposes of reducing fire hazard, altering potential fire spread or fire severity, or reducing potential insect or disease outbreak that may spread to adjacent old-growth forest.

c) To enhance landscape and patch connectivity in forest conditions between old-growth condition patches where connectivity is poor or old-growth patches are isolated.

d) To retain and promote the development of old-growth conditions where current conditions are likely to provide old-growth conditions in the shortest timeframe possible.

e) To retain and promote the development of old-growth conditions in watersheds, firesheds, or other relevant landscape units where existing amounts and distributions of old-growth conditions lack resilience and adaptability to stressors and likely future environments.

f) To retain and promote the development of old-growth conditions in areas of likely climate refugia that are projected to have the inherent capability to sustain old-growth conditions.

g) To promote climate adapted species assemblages in areas where changing climatic conditions are likely to alter current conditions and change species assemblages over time.

Plan Monitoring—

The Chief of the Forest Service is responsible for establishing a National Old-Growth Monitoring Network for the purposes of informing the continued implementation and evaluating the effectiveness of this amendment, based on the initial inventory and remote sensing data and other sources of finer scale information. The National Old-Growth Monitoring Network will adapt to emerging inventory methods, regularly update the national inventory of mature and old-growth conditions, develop analytical processes to interpret trend information, and convey findings to the field as they relate to implementation of the amendment. Regions and units will collaborate with

the Chief's Office, Tribes and Alaska Native Corporations, States, local governments, industry partners, and public stakeholders on the development of approaches to identify old-growth forest conditions and for effectively verifying estimated abundances and distributions.

For plan-level monitoring:

- ~~Within two years, identify initial criteria indicating where these plan components will apply and include such identification in the biennial monitoring report or the broader scale monitoring strategy to be updated as conditions change.~~
- Within biennial monitoring evaluation reports, ~~provide regular updates on~~ identify actions taken pursuant to this amendment and provide ~~updates on~~ data and information regarding measurable changes in unit-level old- growth forest conditions ~~when new information is available~~.
- Select focal species to assess condition of old-growth ecosystems at the unit-level.
- Add the following questions and indicators to plan-level monitoring programs:
    a. Question: Are retention, development, and proactive stewardship activities ~~implemented under the *Adaptive Old-Growth Conservation and Management Strategy*~~ fostering an increasing trend consistent with reaching natural range of variation in the amount, representativeness, redundancy, and connectivity of old-growth forest conditions on the unit?
        i. Indicator: Changes in trends in amounts and distributions of old-growth forest conditions on the unit.
    b. Question: Are vegetation management activities within old-growth forest promoting the desired composition, structure, pattern, and ecological conditions?
        i. Indicator: Changes in composition, structure, and patterns related to desired ecological conditions in areas affected by vegetation management.
    c. Question: Are proactive stewardship achieving desired conditions fostering an increasing trend in the amount, representativeness, redundancy, and connectivity of old-growth forest conditions on the unit and promoting the desired

composition, structure, pattern, and ecological conditions?

i. Indicator: Changes in population and distribution trends of focal species.
ii. Trigger: Threshold population level that activates an evaluation of proactive stewardship activities, assessment of available management alternatives, and adaptations in management when warranted.

Alternative A

Distinctive Roles and Contributions (plan content)

1. The National Forest System plays a distinctive and key role in providing the nation with benefits related to national forests and grasslands within the broader landscape, including old growth forest conditions. Old growth forests are dynamic systems distinguished by old trees and related structural attributes. Old growth typically differs from other stages of stand development in a variety of characteristics, including the presence of old trees, variability in canopy structure, patchiness, and development pathways depending on disturbance regimes and resulting patterns. The structure and composition of old growth forests is highly place-based and can range from old, multi-layered temperate coniferous forests with high amounts of dead wood in the form of standing snags and coarse wood to old, single-storied pine forests or oak woodlands with open canopy structure and fire-maintained herb and litter dominated understories.
2. Old growth forest conditions support ecological integrity and contribute to distinctive ecosystem services—such as long-term storage of carbon, increased biodiversity, improved watershed health, and social, cultural, and economic values. Old growth forests have place-based meanings tied to cultural identity and heritage; local economies and ways of life; traditional and subsistence uses; aesthetic, spiritual, and recreational experiences; and Tribal and Indigenous histories, cultures, and practices. For millennia, Tribal and Indigenous practices have maintained resilient forest structure and composition of forests that harbor high structural and compositional diversity, with particular emphasis on understory plants and fire-dependent wildlife habitat.

Desired Conditions

1. Old growth conditions are dynamic in nature and shift on the landscape over time as a result of succession and disturbance. All old trees and old forest conditions require multiple decades and often multiple centuries to develop. Forest disturbance may reset succession and convert old forest to young forest, but disturbance may also help maintain and enhance old forest conditions. Old tree and old forest management relinks the characteristic pattern and process feedbacks that are responsible for developing and maintain old forest conditions across different forest types.
2. Existing amounts and distributions of old growth forest conditions are maintained and improved relative to the existing condition, and disturbances and proactive stewardship actions foster an increasing trend in the amount, representativeness, redundancy, and connectivity of old growth forest conditions, while ensuring that future conditions will be resilient and adaptable to stressors and likely future environments.
3. The Forest Service, Tribes, other governments, and public stakeholders collaboratively steward mature and old growth forest conditions for present and future generations.
4. Stewardship of mature and old growth forests is grounded in recognition of and respect for Tribal sovereignty and Indigenous knowledge and the ethic of reciprocity and responsibility to future generations. Implementation of proactive stewardship actions and other activities occur through Government-to-Government consultation and co-stewardship partnerships with tribal nations to fulfill treaty obligations and the federal trust responsibility.

Objectives

1. During the current planning horizon, active and passive stewardship of old growth trees will stabilize or increase populations of old growth trees that are in decline from stressors

including but not limited to uncharacteristic extent and severity of fire, insect attack, disease, and drought stress.

2. Within 2 years, working in partnership with Tribes, other governments, and public stakeholders, collaboratively develop conservation strategies for the management of old growth trees, consistent with existing law and treaty rights. Such collaborative conservation strategies shall be consistent with [these amended] plan components. Collaborative conservation strategies shall utilize and reference the best available science (including Indigenous knowledge) in identifying old growth trees and describing the causes and consequences of trends in old growth trees, making use of existing maps, inventories, or science findings. Collaborative conservation strategies may involve or necessitate the preparation of new data and information.
3. Within 2 years and in order to inform project-level analysis, develop and implement unit-level geospatial data management and adaptive management planning to track the status and trends of different age classes of trees over the planning horizon.

Standards

1. The cutting and removal of old growth trees for the purpose of timber production is prohibited. The cutting of individual old growth trees is permitted only for the purpose of the protection of public or administrative safety after a declared emergency or for Tribal cultural uses. Cut trees may not be removed.
2. The cutting and removal of mature trees, except where cutting and removal of mature trees is necessary to conserve old growth trees and develop old growth conditions, is prohibited. The cutting of individual mature trees is permitted only for the purpose of the

protection of public or administrative safety after a declared emergency or for Tribal cultural uses. Cut trees may not be removed.

3. In forests where the cutting and removal of mature trees is necessary to conserve old growth trees and develop old growth conditions, proactive stewardship is limited to activities that foster or increase resilience to disturbances and stressors that may have adverse effects on old growth forest conditions at stand or landscape scales. Proactive stewardship actions must promote at least one of the structural characteristics, attributes, and ecosystem processes that characterize old growth forest conditions for the relevant ecosystem, including but not limited to:
    a. amount, density and distribution of old trees, downed logs, and standing snags;
    b. vertical and horizontal distribution of old growth forest structures, including canopy structure;
    c. patch size characteristics, percent/proportion forest interior, and connectivity;
    d. types, frequencies, severities, patch sizes, extent, and spatial patterns of disturbances;
    e. successional pathways and stand development;
    f. connectivity and the ability of native species to move through the area and cross into adjacent areas;
    g. ecological conditions for at-risk species associated with old growth forest conditions; or
    h. species diversity, and presence and abundance of rare and unique habitat types associated with old growth forest conditions.

4. Proactively manage planted stands to accelerate recruitment of old trees and facilitate development of old growth forest conditions.

Monitoring (Plan Content)

Units shall regularly and at least every five years assess the trends in the abundance, representativeness, redundancy, and connectivity of mature and old growth forest conditions using the best available scientific information, including Indigenous knowledge, relative to the existing condition and make that information publicly available. Information made publicly available shall include losses of mature and old growth forests due to natural (wildfire, drought, insect attacks, disease) and anthropogenic (timber harvest) causes. If monitoring indicates a downward trend in the abundance, representativeness, redundancy, and connectivity of old growth forest conditions, the Forest Service, Tribes, other governments, and public stakeholders within 1 year shall revise the collaborative conservation strategies to better meet desired conditions.

Question: Are mature and old growth trees and forest conditions stable, increasing, or decreasing?

Indicator: Abundance, representativeness, redundancy, and connectivity of mature and old growth forest conditions within the unit.

Alternative B
(Dry Forests)

Distinctive Roles and Contributions (plan content)

1. The National Forest System plays a distinctive and key role in providing the nation with benefits related to national forests and grasslands within the broader landscape, including old- growth forest conditions. Old growth forests are dynamic systems distinguished by old trees and related structural attributes. Old growth typically differs from other stages of stand development in a variety of characteristics, including the presence of old trees, variability in canopy structure, patchiness, and development pathways depending on disturbance regimes and resulting patterns. The structure and composition of old growth forests is highly place-based and can range from old, multi-layered temperate coniferous forests with high amounts of dead wood in the form of standing snags and coarse wood to old, single-storied pine forests or oak woodlands with open canopy structure and fire-maintained herb and litter dominated understories.
2. Old growth forest conditions support ecological integrity and contribute to distinctive ecosystem services—such as long-term storage of carbon, increased biodiversity, improved watershed health, and social, cultural, and economic values. Old growth forests have place-based meanings tied to cultural identity and heritage; local economies and ways of life; traditional and subsistence uses; aesthetic, spiritual, and recreational experiences; and Tribal and Indigenous histories, cultures, and practices. For millennia, Tribal and Indigenous practices have maintained resilient forest structure and composition of forests that harbor high structural and compositional diversity, with particular emphasis on understory plants and fire-dependent wildlife habitat.

Desired Conditions

1. Old growth conditions are dynamic in nature and shift on the landscape over time as a result of succession and disturbance. All old trees and old forest conditions require multiple decades and often multiple centuries to develop. Forest disturbance may reset succession and convert old forest to young forest, but disturbance may also help maintain and enhance old forest conditions. Old tree and old forest management relinks the characteristic pattern and process feedbacks that are responsible for developing and maintain old forest conditions across different forest types.
2. Existing amounts and distributions of old growth forest conditions are maintained and improved relative to the existing condition, and disturbances and proactive stewardship actions foster an increasing trend in the amount, representativeness, redundancy, and connectivity of old growth forest conditions, while ensuring that future conditions will be resilient and adaptable to stressors and likely future environments.
3. The Forest Service, Tribes, other governments, and public stakeholders collaboratively steward mature and old growth forest conditions for present and future generations.
4. Stewardship of mature and old growth forests is grounded in recognition of and respect for Tribal sovereignty and Indigenous knowledge and the ethic of reciprocity and responsibility to future generations. Implementation of proactive stewardship actions and other activities occur through Government-to-Government consultation and co-stewardship partnerships with tribal nations to fulfill treaty obligations and the federal trust responsibility.

Objectives

1. During the current planning horizon, active and passive stewardship of old growth trees will stabilize or increase populations of old growth trees that are in decline from stressors

including but not limited to uncharacteristic extent and severity of fire, insect attack, disease, and drought stress.

2. Within 2 years, working in partnership with Tribes, other governments, and public stakeholders, collaboratively develop conservation strategies for the management of old growth trees, consistent with existing law and treaty rights. Such collaborative conservation strategies shall be consistent with [these amended] plan components. Collaborative conservation strategies shall utilize and reference the best available science (including Indigenous knowledge) in identifying old growth trees and describing the causes and consequences of trends in old growth trees, making use of existing maps, inventories, or science findings. Collaborative conservation strategies may involve or necessitate the preparation of new data and information.
3. Within 2 years and in order to inform project-level analysis, develop and implement unit-level geospatial data management and adaptive management planning to track the status and trends of different age classes of trees over the planning horizon.

Standards

1. The cutting and removal of old growth trees for the purpose of timber production is prohibited. The cutting of individual old growth trees is permitted only for the purpose of the protection of public or administrative safety after a declared emergency or for Tribal cultural uses. Cut trees may not be removed.
2. The cutting and removal of mature trees, except where cutting and removal of mature trees is necessary to conserve old growth trees and develop old growth conditions, is prohibited. The cutting of individual mature trees is permitted only for the purpose of the

protection of public or administrative safety after a declared emergency or for Tribal cultural uses. Cut trees may not be removed.

3. In forests where the cutting and removal of mature trees is necessary to conserve old growth trees and develop old growth conditions, proactive stewardship is limited to activities that foster or increase resilience to disturbances and stressors that may have adverse effects on old growth forest conditions at stand or landscape scales. Proactive stewardship actions must promote at least one of the structural characteristics, attributes, and ecosystem processes that characterize old growth forest conditions for the relevant ecosystem, including but not limited to:
    a. amount, density and distribution of old trees, downed logs, and standing snags;
    b. vertical and horizontal distribution of old growth forest structures, including canopy structure;
    c. patch size characteristics, percent/proportion forest interior, and connectivity;
    d. types, frequencies, severities, patch sizes, extent, and spatial patterns of disturbances;
    e. successional pathways and stand development;
    f. connectivity and the ability of native species to move through the area and cross into adjacent areas;
    g. ecological conditions for at-risk species associated with old growth forest conditions; or
    h. species diversity, and presence and abundance of rare and unique habitat types associated with old growth forest conditions.

4. Proactively manage seasonally dry, fire prone forests to arrest declining trends in abundance of old growth trees. Proactive management may include mechanical thinning and reintroduction of fire designed to restore conditions conducive to the recruitment and persistence of old growth trees.
5. Proactively manage planted stands to accelerate recruitment of old trees and facilitate development of old growth forest conditions.

Monitoring (Plan Content)

Units shall regularly and at least every five years assess the trends in the abundance, representativeness, redundancy, and connectivity of mature and old growth forest conditions using the best available scientific information, including Indigenous knowledge, relative to the existing condition and make that information publicly available. Information made publicly available shall include losses of mature and old growth forests due to natural (wildfire, drought, insect attacks, disease) and anthropogenic (timber harvest) causes. If monitoring indicates a downward trend in the abundance, representativeness, redundancy, and connectivity of old growth forest conditions, the Forest Service, Tribes, other governments, and public stakeholders within 1 year shall revise the collaborative conservation strategies to better meet desired conditions.

Question: Are mature and old growth trees and forest conditions stable, increasing, or decreasing?

Indicator: Abundance, representativeness, redundancy, and connectivity of mature and old growth forest conditions within the unit.

Alternative C
(Connecticut Approach)

Distinctive Roles and Contributions (plan content)

1. The National Forest System plays a distinctive and key role in providing the nation with benefits related to national forests and grasslands within the broader landscape, including old growth forest conditions. Old growth forests are dynamic systems distinguished by old trees and related structural attributes. Old growth typically differs from other stages of stand development in a variety of characteristics, including the presence of old trees, variability in canopy structure, patchiness, and development pathways depending on disturbance regimes and resulting patterns. The structure and composition of old growth forests is highly place-based and can range from old, multi-layered temperate coniferous forests with high amounts of dead wood in the form of standing snags and coarse wood to old, single-storied pine forests or oak woodlands with open canopy structure and fire-maintained herb and litter dominated understories.
2. Old growth forest conditions support ecological integrity and contribute to distinctive ecosystem services—such as long-term storage of carbon, increased biodiversity, improved watershed health, and social, cultural, and economic values. Old growth forests have place-based meanings tied to cultural identity and heritage; local economies and ways of life; traditional and subsistence uses; aesthetic, spiritual, and recreational experiences; and Tribal and Indigenous histories, cultures, and practices. For millennia, Tribal and Indigenous practices have maintained resilient forest structure and composition of forests that harbor high structural and compositional diversity, with particular emphasis on understory plants and fire-dependent wildlife habitat.

Desired Conditions

1. Old growth conditions are dynamic in nature and shift on the landscape over time as a result of succession and disturbance. All old trees and old forest conditions require multiple decades and often multiple centuries to develop. Forest disturbance may reset succession and convert old forest to young forest, but disturbance may also help maintain and enhance old forest conditions. Old tree and old forest management relinks the characteristic pattern and process feedbacks that are responsible for developing and maintain old forest conditions across different forest types.
2. Stewardship of mature and old growth forests is grounded in recognition of and respect for Tribal sovereignty and Indigenous knowledge and the ethic of reciprocity and responsibility to future generations. Implementation of proactive stewardship actions and other activities occur through Government-to-Government consultation and co-stewardship partnerships with Tribal nations to fulfill treaty obligations and the federal trust responsibility.
3. Existing amounts and distributions of old growth forest conditions are improved relative to the existing condition, and disturbances and proactive stewardship actions foster an increasing trend in the amount, representativeness, redundancy, and connectivity of old growth forest conditions, while ensuring that future conditions will be resilient and adaptable to stressors and likely future environments.
4. The Forest Service, Tribes, other governments, and public stakeholders collaboratively steward mature forest conditions to provide for the recruitment of old growth forest conditions and for other multiple use purposes, including timber production where appropriate, through both proactive and passive management.

5. Management of mature forest conditions across each unit reflects: 1) proactive stewardship for the purpose of recruitment of old growth forest conditions; 2) passive stewardship for the purpose of recruitment of old growth forest conditions; and 3) proactive or passive stewardship for the purpose of timber production and other multiple uses.
6. During concentrated periods of analysis [OBJ 2, OBJ 3, OBJ 4], ongoing project implementation maintains existing programs of work, including timber harvest for the purpose of timber production.

Objectives

1. During the current planning horizon, active and passive stewardship of old growth trees will stabilize or increase populations of old growth trees that are in decline from stressors including but not limited to uncharacteristic extent and severity of fire, insect attack, disease, and drought stress.
2. Within 1 year, use field verification, surveys, and other methods to verify and map the current amount, representativeness, redundancy, and connectivity of mature and old growth forests at a sufficient resolution to facilitate unit project-level analysis and planning. Use this unit-level information ("unit inventory") to conduct a scientifically valid estimate of the historic range of variation of the amount, representativeness, redundancy, and connectivity of mature and old growth forests on the unit ("unit HRV analysis").
3. Within 2 years, and in consultation with Tribes and partnership with the public and other stakeholders, use the unit inventory to determine the future amount, representativeness,

redundancy, and connectivity of mature and old growth forests on the unit necessary to meet desired conditions [DC 3, DC 4] (“unit FRV analysis”).

4. Within 3 years, and in consultation with Tribes and partnership with the public and other stakeholders, collaboratively develop conservation strategies for the management of mature forest conditions to meet desired conditions (“collaborative conservation strategies”) [DC 3, DC 4, DC5]. Such collaborative conservation strategies shall be consistent with these amended plan components. Collaborative conservation strategies shall utilize and reference the best available science (including Indigenous knowledge) and the unit inventory, HRV analysis, and FRV analysis in identifying mature and old growth trees and forest conditions and in describing the causes and consequences of the trends in the amount, representativeness, redundancy, and connectivity of mature and old growth trees and forest conditions. Design collaborative conservation strategies to ensure that future conditions are within or approaching the natural range of variation, resilient, and adaptable to stressors and likely future environments, and where appropriate, including identifying areas for old growth recruitment and retention. Sstablish target milestones for management specific to the plan area, to support progress toward the desired conditions of this amendment. Collaborative conservation strategies may involve or necessitate the preparation of new data and information.
5. Within 3 years, develop and implement unit-level geospatial data management and adaptive management planning to track the status and trends of all age classes of trees over the planning horizon to inform project-level analysis.

Standards

1. The cutting and removal of old growth trees for the purpose of timber production is prohibited. The cutting of individual old growth trees is permitted only for the purpose of the protection of public or administrative safety after a declared emergency or for Tribal cultural uses. Trees cut for Tribal cultural uses may be removed.
2. Until the unit's collaborative conservation strategy is complete, the cutting and removal of mature trees, except where cutting and removal of mature trees is necessary to conserve old growth trees and develop old growth conditions or for Tribal cultural uses, is prohibited. The cutting of individual mature trees is permitted only for the purpose of the protection of public or administrative safety after a declared emergency and may not be sold.
3. In forests where the unit's collaborative conservation strategy indicates that the cutting and removal of some mature trees is necessary to conserve old growth trees and develop old growth conditions, proactive stewardship is limited to activities that foster or increase resilience to disturbances and stressors that may have adverse effects on old growth forest conditions at stand or landscape scales. Proactive stewardship actions must promote at least one of the structural characteristics, attributes, and ecosystem processes that characterize old growth forest conditions for the relevant ecosystem, including but not limited to:
    a. amount, density and distribution of old trees, downed logs, and standing snags;
    b. vertical and horizontal distribution of old growth forest structures, including canopy structure;

c. patch size characteristics, percent/proportion forest interior, and connectivity;
d. types, frequencies, severities, patch sizes, extent, and spatial patterns of disturbances;
e. successional pathways and stand development; and/or
f. connectivity and the ability of native species to move through the area and cross into adjacent areas.

4. Passive management of mature trees and forests to achieve old growth forest conditions is permitted.
5. The cutting and removal of mature trees and forests that have been identified in the unit's collaborative conservation strategy as unnecessary for the conservation and recruitment of old growth trees and forest conditions is permitted for the purpose of timber production, consistent with other plan direction.
6. Proactively manage planted stands to accelerate recruitment of old and mature trees and facilitate development of old growth and mature forest conditions.

Monitoring (Plan Content)

Units shall regularly and at least every five years assess the trends in the abundance, representativeness, redundancy, and connectivity of mature and old growth forest conditions using the best available scientific information, including Indigenous knowledge, relative to the existing condition and make that information publicly available. Information made publicly available shall include losses of mature and old growth forests due to natural (wildfire, drought, insect attacks, disease) and anthropogenic (timber harvest) causes. If monitoring indicates a downward trend in the abundance, representativeness, redundancy, and connectivity of old growth forest conditions, the Forest Service, Tribes, other governments, and public stakeholders

within 1 year shall revise the collaborative conservation strategies to better meet desired conditions.

Question: Are mature and old growth trees and forest conditions stable, increasing, or decreasing?

Indicator: Abundance, representativeness, redundancy, and connectivity of mature and old growth forest conditions within the unit.

Question: Are proactive stewardship achieving desired conditions fostering an increasing trend in the amount, representativeness, redundancy, and connectivity of old-growth forest conditions on the unit and promoting the desired composition, structure, pattern, and ecological conditions?

Indicator: Changes in population and distribution trends of focal species.

Trigger: Threshold population level that activates an evaluation of proactive stewardship activities, assessment of available management alternatives, and adaptations in management when warranted.