Data Submitted (UTC 11): 9/16/2024 4:00:00 AM
First name: Denise
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Organization: Forest Bridges: The O&C Forest Habitat Project, Inc.
Title: Executive Director
Comments: Forest Bridges' full submission of comments is in Attachment 1: The Merits of--and Reconsiderations for--Preferred Alternative 2 in the Old Growth Amendment DEIS, as informed by Forest Bridges' work on the O&C Lands of western Oregon.

We have also attached two other documents as we refer to in our core public comments.

Thank you for receiving all and for taking the time to review and consider our comments.

Kind regards,

The Forest Bridges Team

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The following written comments were submitted via:

https://cara.fs2c.usda.gov/Public//CommentInput?Project=65356

September 16, 2024

Attn: USDA Forest Service

Re: Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System, Draft Environmental Impact Statement (Old Growth Amendment DEIS), Project #65356

Dear USDA Forest Service:

Thank you for the opportunity to provide this response to the USDA Forest Service's call for public comments regarding "Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System, Draft Environmental Impact Statement--A.K.A. Old Growth Amendment DEIS--(Project 65356)," Forest Bridges: The O&C Forest Habitat Project (Forest Bridges) respectfully submits substantive comments in the pages that follow, entitled:

"The Merits of[mdash]and Reconsiderations for[mdash]Preferred Alternative 2 in the Old Growth Amendment DEIS, as informed by Forest Bridges' work on the O&C Lands of western Oregon"

Founded in Roseburg, Oregon in 2015 on the basis of trust and a sincere interest in searching for common ground, Forest Bridges (https://www.forestbridges.org) is a grassroots, charitable nonprofit collaborative that brings together people of different perspectives on forest management[mdash]e.g., conservation, recreation, timber industry, Tribes, government, the general public, etc. Our collaborative aims to foster sustainable forest health and multi-species habitats through active management and restoration solutions for the 2.9 million acres of O&C Lands1 in western Oregon, which are managed largely by the Bureau of Land Management (BLM) across five BLM districts, with 500,000 acres managed by the US Forest Service in portions of six National Forests. Forest Bridges promotes diverse discussions, identifies and develops solutions towards sustainable forest health and habitats and finds and addresses barriers to implementation by facilitating the development of an appropriate policy and regulatory framework. Together, our collaborative has developed and agreed upon a set of principles and proposals (click here todownload Forest Bridges Principles of Agreement) for active forest management on the O&C Lands that are grounded in leading-edge science, including ecological forestry and fire ecology, braided with Indigenous Knowledge and field practitioner experience.

This work, as well as responding to calls for public inputs into planning processes like the Old Growth Amendment and the Northwest Forest Plan Amendment, is all done in support of the US Forest Service and the Bureau of Land Management and their efforts to evolve forest management strategies and plans to address 21st Century challenges and issues. Our Active Conservation Management model aligns with the combination of O&C Act of 1937 (which reads: "for permanent forest production[hellip] in accordance with the princip(le) of sustained yield, for the purpose(s) of a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities") and the other laws and regulations governing management of O&C lands.

It has been of interest for the Forest Bridges collaborative to review the national scale information the Forest Service provided and see parallels from other broad geographic areas, besides the Pacific Northwest. While some general comments are included here in this broader context, Forest Bridges' expertise and experience are focused on the western Oregon O&C Lands as described below. Further, we believe that all planning should be locally driven, and the utility of this information should be to inform local planning efforts on respective National Forests.

The Active Conservation Management Lens that Guides Our Comments

Given the increased fequency and severity of wildfires in recent years - reserves -- including naturally developing mature and old growth stands, monuments and wilderness areas, are at great risk - requiring a rethink of protection - again, what we call "Active Conservation Management." We propose a major shift to the management paradigm across the O&C Lands. Our work largely concerns a checkerboard ownership, and to the extent there are checkerboard ownerships in National Forest lands elsewhere, some of our work is relevant, particularly in management with thinning and fire to sustain forests including Old Growth.

In our proposals for the O&C Lands, fixed location Late-Successional Reserves (and other types of reserves) are replaced with an all-O&C Lands management approach that applies metered, monitored silviculture strategies and prescribed fire to achieve specified habitat diversity goals, including legacy and structurally complex old-growth habitats. Harvest and thinning, both with legacy retention, seek to emulate the range of historical conditions and are limited to work which puts the forests as a whole on a trajectory for regular habitat renewal: 50% structurally complex old growth in O&C moist forests and structurally complex old growth throughout O&C dry forests, thinned to historic densities while retaining structural and multi- species diversity, leaving dry forests that can predictably tolerate fire and survive with increased persistence, carbon storage, and sustained growth and development. In addition, our strategies provide for watershed protection, recreational opportunities, timber, rural jobs and support for county public services.

Cultural Burning practices, partnering and co-management with Indigenous tribes -- on their terms -- are integral to our proposals.

Highlights of Our Comments to the Forest Service

Forest Bridges sees old-growth forests in the context of what we've outlined above[mdash]essentially, within a forest continuum of change and persistence across forest ecosystems and time. In reviewing the proposed Old Growth amendment, including the four Alternatives, we were pleased to see that the Forest Service selected Alternative 2, which emphasizes ecosystem and landscape-scale conservation (when feasible in multi-ownership contexts), in contrast to focusing on individual species or seral stages at the expense of other conditions that lend heterogeneity and biodiversity to the "whole."

Overall, Alternative 2 aligns best with our Active Conservation Management model in working to address increasing severe wildfire and climate stressors to old-growth forests by

1. enacting ecologically focused, adaptive management that treats as many vulnerable acres as possible to confer resilience,

1. establishing roles for Indigenous Knowledge and tribal leadership in the proactive stewardship of these important ecosystems; and

2. applying a range of treatment tools--prescribed fire, timber harvest, hazardous fuels reduction via thinning, wildlife habitat improvement, and other vegetation management that aligns with restoration and resilience objectives similar to our own proposals.
3. utilizing an adaptation of an approach similar to that of Forest Bridges using thinning, harvests, snag management, and prescribed fire as tools to achieve sustainability of a range of habitats in any alternate section ownership of Federal land, especially in our case, the O&C Lands of western Oregon.

While Forest Bridges enthusiastically supports a proposed shift from passive, late-successional reserve-based conservation strategies, as well as a paradigm shift away from timber harvest for its own sake (i.e., conducted apart from the creation and sustainability of habitats) to sensitive, purposeful thinning, harvest and fire management for the O&C Lands, and indeed for any National Forest Systems, we have certain areas of concern we think the Forest Service should address as it finalizes the Old-Growth Amendment. These include addressing barriers (identified in some detail below) that preclude evaluating and potentially treating ANY old growth stands for fire resistance and resilience regardless of its location on the landscape, including in the WUI and any other areas where densities and mixes of species do not align with the historic conditions, and which create increased potential for destructive stand replacement fires. Forest Bridges would welcome the following additions to the Alternative 2 framework: improving the social acceptability of prescribed fire (Hessburg et al. 2020), transforming regulatory and legal climates to enable greater use of prescribed fire as forest restoration tools, and working to update the Late-Successional Reserve model of management to include Active Conservation Management in the Forest Service's conservation strategies.

The Importance of Addressing Barriers that Could Inhibit Effective Implementation of An Effective Old Growth Amendment Framework

As with any paradigm shift to 21st century forest management, carrying out the explicit purposes of the policy changes proposed in this Old growth Amendment will require addressing barriers to management that exist in current law. These barriers cannot be addressed in forest planning or other administrative actions. They require legislative changes to break the pattern of disruption of management through the courts. These changes include the following:

*
* Clean Air Act revisions to remove all barriers to the flexibility for carrying out pile burning and prescribed fire at any time of the year, and in any location so long as it will have the effect of mitigating destructive wildfires. The workforce for this extensive work will be a repurposing of the wildland firefighting crews, as wildfire is replaced with prescribed fire.
* A recognition of greatly increased need for Federal funding of Federal forest management, in recognition of the Ecosystem Services provided, particularly for prescribed fire, control of invasive nonnative species, and other restoration practices that are not associated with a forest thinning or harvest project.
* A reassessment of the Endangered Species Act for conflicts between guidance for designation and management of Critical Habitat (often using the now outdated reserve, no-touch model) and the historic densities and compositions of forests in pre-colonial times, and practices of Active Conservation Management forestry, to promote habitat sustainability.
* Active Conservation Management of Riparian, WUI, Wild and Scenic Rivers, and general forest habitat management areas to historic densities and composition in pre-colonial times, when Indigenous people stewarded the forests and beneficial fire was much more commonplace. (Indigenous tribes did not recognize reserves, or riparian areas for that matter.)
* Where stand-replacement fires do occur (greater than 90% of forest canopy destroyed): restoration harvests

and prescribed fire intended to mitigate the re-occurrence and impacts of reburns on soil and biological species, both above- and below-ground.
* Clear legislative direction (a paradigm shift) to allow the use of thinning and harvest as tools of forest restoration of habitats to reduce fuels and increase revenues, when those harvests are carried out for the purposes of restoring and sustaining a historical range of forest habitats and seral stages, at historic densities. The reference condition for species composition and densities should be pre-colonial times, as informed by science and the Knowledge of local Indigenous Tribes (further referenced in our comments below). From this starting point, monitoring and adaptive management will inform changes in the specifications for desired forest sustainability conditions.

As the National Forests and BLM develop new plans under this guidance for the local areas, modeling as a tool will be critical, analyzing appropriate variables, as proposed alternatives are developed.

The Potential Advantage of Opening the Old Growth Amendment to Legal Review

Based on the Federal Notice calling for public comments on the Old Growth Amendment DEIS, it is our understanding that the proposed action is not subject to objection as stated in the 36 CFR219 subpart B objection process, in accordance with 36 CFR 219.51(b). Essentially, unlike other documents prepared under NEPA or Federal Laws passed by Congress, this proposed Old Growth Amendment (generally speaking) cannot be litigated. On the one hand, Forest Bridges believes that litigation is often used redundantly in forest planning and projects, and that procedures for legal consistency should be streamlined through the NEPA process from forest plan to on-the- ground action. On the other hand, Forest Bridges believes an opportunity should be publicly available for appeal and litigation in the judicial system of this Old Growth Amendment, prior to it becoming finally adopted. Given the magnitude of impact that the proposed action would make on a national scale[mdash]128 National Forest Plans--we believe it is prudent to allow for such legal challenge.

The O&C Lands are a case of pre-existing regulations established prior to the old-growth amendment decision including the 1937 O&C Act, which calls for purposeful timber harvest as a strategy. Forest Bridges believes that the development of old-growth forest habitats is consistent with and can take place within the context of this old-growth amendment. While most of our comments over the following pages are site-specific to the alternatives for the western Oregon area we know best, we do offer some general comments based on the US Forest Service findings about Old Growth and its development (or decadence) across the country. We also share how we ruled out the three other alternatives as insufficient or misaligned with sustainable old- growth forest management. Thank you again for taking the time to review and consider our comments as you finalize the Old Growth Amendment.

Sincerely yours (electronically signed),

Thomas McGregor Denise A. Barrett

Thomas McGregor Denise A. Barrett

Board Chair Executive Director

CC: Forest Bridges Board and Council of Advisors

"The Merits of--and Reconsiderations for[mdash] Preferred Alternative 2 in the Old Growth

Amendment DEIS, as informed by Forest Bridges' work on the O&C Lands of western Oregon"

Introduction

In accordance with Section 23001(a)(4) of the Inflation Reduction Act (IRA) ("National Forest System Restoration and Fuels Reduction Projects") and Section 2(c)(ii) of Executive Order 14072

("Strengthening the Nation's Forests, Communities, and Local Economies"), the U.S. Forest Service has issued proposals to amend and develop consistent management frameworks for conserving, stewarding, recruiting and monitoring old-growth forests in National Forests. The intent of this amendment is to "foster the long-term resilience of old-growth forests and their contributions to ecological integrity across the National Forest System," which comprises more than 193 million acres of forest land

in the U.S. (USDA FS 2024a). The explicit purposes of this policy change are to (USDA FS 2024a):

*
* Foster ecologically focused management across the National Forest System by maintaining and developing old-growth forests while improving and expanding their abundance and distribution and protecting them from the increasing threats posed by climate change, wildfire, insects and disease, encroachment pressures from urban development, and other potential stressors, within the context of the National Forest System's multiple-use mandate.
* Establish a clear role for Indigenous Knowledge and tribal leadership in the proactive stewardship and furtherance of old-growth forests on National Forest System lands.
* Facilitate the development of geographically informed adaptive strategies for old-growth forest conservation to support the effective implementation of this amendment and enable co-stewardship with Tribes and Alaska Native Corporations and collaboration with States, local governments, industry partners, and public stakeholders.
* Establish a national monitoring framework to track trends and distribution patterns of old-growth forests for

inventory, evaluation, assessment, and adaptive management purposes.

These objectives recognize the distinctive role that old growth plays in sustaining ecological, social, and economic benefits while also contributing to nature-based climate solutions. The various functions and values of old growth across affected Federal forest lands include storing carbon in old trees at historic densities, sustaining biodiversity, mitigating wildfire risk by enhancing resilience to extremes in climate and fire, promoting cultural and spiritual wellbeing, and providing recreational opportunities (partially from USDA FS 2024a). Old growth is loosely defined in the amendment by its function and its place-based characteristics:

Old-growth forests support ecological integrity and contribute to distinctive ecosystem services[hellip][they] have place-based meanings tied to cultural identity and heritage; local economics and ways of life; traditional and subsistence uses; aesthetic, spiritual, and recreational experiences; and Tribal and Indigenous histories, cultures, and practices[hellip]What constitutes old-growth forest is informed by best available science, which includes Indigenous Knowledge.

[Text graphic: "Forest Bridges sees old- growth forests within a forest continuum of change and persistence across forest ecosystems and time."

This amendment is intended to establish management protocols that preserve these values into the future while guarding against contemporary threats. Old forests are ubiquitous within USFS- managed lands, but increasingly severe threats are causing reductions in forest cover across the country. Initial inventories conducted by the Forest Service identified an estimated 24.7 million acres of old-growth forest and 68.1 million acres of "mature" forest, representing 17% and 47%, respectively, of the National Forest land base (USDA FS

2024a). Unfortunately, 17 of the 80 vegetation types identified contained less than 5% of old-growth forest as part of their composition as a result of disturbance, land use history and conversion, and expansion of the wildland-urban interface (WUI).

These disparities are exacerbated by major threats to old- growth systems, including those from wildfire, climate change, fire exclusion, insects and diseases, and drought,

of which severe wildfire is the leading threat (USDA FS 2024b). For illustration, wildfire resulted in a 2.6% reduction of old-growth forest on National Forest lands between 2000-2020 across the nation. More than half of these wildfires were "moderate-severe" or "severe," which reduced old growth where they occurred by 11% and 30%, respectively (Figure 1). (Interestingly, old

growth that experienced low-severity fire showed net gains in forest acreage, indicating that prescribed fire may have an important role in supporting old growth into the future.)

[charts]

Figure 1. More than half of all wildfires that occurred in old-growth forests on National Forest land had "moderate-severe" or "severe" disturbance effects, resulting in net losses of 150,000 acres and 505,000 acres, respectively (-11% and -30%) (USDA FS 2024a).

Indeed, high-severity fires are becoming larger and more frequent across the country. In dry forests, in particular, evidence of more high-severity fire is copious and incontrovertible, with some areas experiencing 4-6x higher severities in the past 30 years than is historically expected (Hagmann et al. 2021, Haugo et al. 2019). This is consistent with reports of increasingly larger high-severity fire extents (>250 acres) across the western U.S. (Miller et al. 2009, Parks & Abatzoglou 2020, Reilly et al. 2017), as well as a higher proportion of projected high-severity fire

nationwide as compared to historical norms (Figure 2; USDA FS 2024b). The proposed amendment seeks to address these threats to old-growth forests by enacting ecologically focused, adaptive management that confers resilience while establishing roles for Indigenous Knowledge and tribal leadership in the proactive care of these important ecosystems.

Figure 2. The percentage of mature and old-growth (MOG) forests within the National Forest System exposed to very high-severity fire has dramatically increased since the late 20th century and is projected to continue to explode in the next 75 years (USDA FS 2024b). The amount of high-severity fire was likely far lower before European colonization and the forced reduction of Indigenous cultural burning. Note to the reader: Charts at this level of resolution hide the site-specific variations in burn severity, such as between moist forests (characterized by infrequent high-severity fire) and dry forests (characterized by low to moderate severity fire) in the Pacific Northwest. Note to the US Forest service: This chart would provide more perspective if it included another bar to show the historical fire percentages estimated from precolonial times, albeit different sources of information.

Forest Bridges Supports Alternative 2 (with some caveats)

Due to the ongoing threats of severe wildfire now and into the future, the proposed amendment emphasizes the importance of proactive stewardship -- what we call "Active Conservation Management" -- to protect old-growth forests and restore beneficial fire for resilience to climate change and other stressors. Alternative 2, the USFS's preferred alternative, specifies that the sole purpose of management will be to promote the composition, structure, pattern, or ecological process necessary for resilient old growth through the use of proactive stewardship (USDA FS

2024a), as opposed to timber harvest for its own sake. Proactive stewardship includes prescribed fire, timber harvest, hazardous fuels reduction via thinning, wildlife habitat improvement, and other vegetation management that aligns with restoration and resilience objectives. Timber harvest is only allowed if local managers determine that tree removal is necessary in service of restoration, protection or resilience. (In other words, no timber harvest for timber output's sake.) Harvest under Alternative 2 could be for safety reasons in the WUI or municipal watersheds (e.g., thinning to reduce density and fire risk to critical infrastructure), to

create or maintain trails, for culturally or ecologically significant reasons (as informed by Tribes; e.g., restoring certain species in overly dense stands), or to comply with other statutes or regulations that were made prior to the old-growth amendment decision (USDA FS 2024a).

Based on its well-informed Active Conservation Management model, Forest Bridges urges the Forest Service to add some key dimensions to Alternative 2's option for the use of timber harvest in the service of restoration, protection or resilience objectives[mdash]specifically, restoring stands to precolonial composition, structure and densities. Forest Bridges has found broad support for these purposes of restoration, protection and resilience of habitat, but only under the condition that local or regional forest plans set standards based on the precolonial historic conditions of composition, structure and densities.

For example, in the case of the dry forest of western Oregon O&C Lands, located largely in southwest Oregon, Forest Bridges proposes a reduction in relative density to 0.15-0.25 across 60-75% of the dry forest. The remainder is in skips and gaps, but no variable retention

regeneration harvests in dry forests. We have further proposed that in moister areas of the dry forest, these relative densities should be 0.20-0.30 (recently updated from 0.25-0.35 in our previous work on dry forests). These relative density targets have been developed by Forest Bridges through extensive deliberation among our collaborators and scientists to correct the ahistoric extent of stand replacement fire, which was historically quite nominal in dry forests. Forest Bridges' stated target for stand replacement fire in dry forests is 5% of acreage. More recently Haugo et al 2019) determined that the historic standard for dry forests in SW Oregon is 6-9% historically, compared with 36% stand replacement fire destruction of acreage in recent years. These goals and rationale for management of the dry forest are further explained in Forest Bridges' comments to the Forest Service on the draft EIS for Northwest Forest Plan Amendment that guides planning for 17 National Forest in Oregon, Washington and northern California (clickhere to download a copy).

Forest Bridges' moist forest strategies for the O&C Lands of western Oregon focus on a goal of also removing Late-successional reserves and other reserves, relative to habitat and protection from wildfire, while managing toward a target of 50% structurally complex old growth forest throughout the O&C Lands. A set, limited amount of variable retention regeneration harvest is applied that allows forest regeneration but also progresses the O&C moist forests toward this old growth goal each year. This proposal, like our dry forest and transitional forest proposals (below), is not based on reserve acres but on the acres of forest stands themselves. For example, as an old growth stand burns in the moist forest in a stand replacement fire, that stand no longer would count as old growth, leaving mature stands--ideally treated to allow a multi-layered canopy to develop[mdash]to grow to take its place in a trajectory toward achieving 50% structurally complex old growth.

Forest Bridges has also developed and promotes an entire process around prescribed fire, (e.g., broadcast and pile burning) and snags to promote habitat development and sustainability to decrease fuel loads and sustain

forests throughout the O&C Lands that generally are situated in a checkerboard ownership pattern as well as a particularly fire-prone area. This part of our Active Conservation Management approach also supports the development and sustainability of old- growth forests by promoting a pattern of burning that replenishes the landscape in low to moderate intensity fires that retain old growth characteristics and trees. The treatment steps include:

1. Apply Forest Bridges' thinning and harvest strategies (specific to dry, moist and transitional O&C forests): first remove excess merchantable material applying ecological silvicultural treatments that have as a first priority promoting the desired habitat, seral stages and tree densities for a sustainable forest, while providing a wood resource for the community.
2. Develop fire-secure property lines (A.K.A. fuel breaks or fire trails) by using mechanical or hand-piling, followed by pile-burning wherever the topography of the section boundary in the checkerboard ownership is adverse to the protection of neighboring properties from fire. These fuel break boundaries can be small or large, but in the context of mostly square-mile sections, they normally leave a substantial area in the center of the section where broadcast burning can be safely applied after thinning. No snags are left in the pile burning area. Piles are burned at a time in the wetter season when the risk of transition to a broadcast burn is past.
3. After sufficient fuel breaks have been created along property lines, conduct prescribed fire (e.g., broadcast burning) in the central areas of the sections to mimic the frequency of prescribed fire of pre-colonial time. These prescribed fires are NOT conducted during the wildfire season (summer in the Pacific Northwest) but in the shoulder seasons where moisture can be found in the larger fuels.
4. The center of a section is also where snags can be safely left, (except for an accommodation if the fuel break perimeters are insufficient in width to prevent snags from igniting neighboring property during wind events that spread embers).
5. Suppress all fires in the fire danger season completely, whether caused by lightning or other causes. Fire during fire season is counterproductive to sustaining forests and is no substitute for a robust thinning and prescribed fire program. Forest Bridges opposes the practice of managed suppression in the fire danger season, as has been observed and is practiced by the US Forest Service in the Pacific Northwest. Like Late Successional Reserves, this is an outdated, misdirected and destructive practice. that should never be allowed when fire conditions bring the risk of long term damage to forest lands, as well as smoke damage to the public's health and consumption of biomass carbon reserves.

In Forest Bridges' case of supporting the opportunity for agencies to implement legacy and old growth strategies on the O&C Lands: some O&C forests contain old growth trees, but in others, there is no old growth, although some cohorts of trees are older and larger than others. Our hope for these forests is that they continue to develop--utilizing the best legacy, regardless of age,

within goals for tree density, habitat types, forest composition, multi-layered canopies, etc.--so they can develop old growth characteristics sustainably, long into the future. This process will require forest plans that promote Active Conservation Management across the entire Federal forest, including thinning and harvest consistent with the Forest Bridges goals for habitat distribution, and seral stages.

Forest Bridges is further distinguishing a Transitional Forest type, intermediate between dry and moist forests. In Transitional forests there will be a

mosaic of dry and moist forest management strategies applied, depending on the tendency of the site to be like moist or dry forests.

Forest Bridges enthusiastically supports the proposed shift from passive, reserve-based conservation to engaged, Active Conservation Management that strategically guides forests towards resilient conditions while preserving their ecological and cultural values.

Protecting forest stands requires a more strategic and active approach, rather than simply setting forest lands aside as reserves and hoping they remain sustainable ecosystems without adequate Active Conservation Management of at-risk resources[mdash]particularly in dry, fire-prone forests (Prichard et al. 2021). Conserving forests through climate-change adaptation practices like mechanical thinning and underburning on as many vulnerable acres as possible to restore composition and densities to the precolonial condition (like the example described above for the O&C Lands) is the more prudent and scientifically grounded approach across a wide spectrum of forest stand conditions (Agee & Skinner 2005, D'Amato et al. 2013, Hurteau et al. 2019). This restoration work has to be done at a scale that returns the forests to their precolonial conditions in a reasonable period of time. For our work, Forest Bridges chose 30 years as a reasonable timeframe to address overly dense stands in dry forests.

The alternative of "no action"[mdash]placing forests into untreated reserves shielded from stewardship[mdash]is no longer tenable in the age of climate change and extreme, stand-replacing fire (Agee 2002). The risks of not treating vulnerable forest stands include the probability of stand- replacing wildfire in areas where tree density and fuel accumulation have reached dangerously high levels. Indeed, the Mature and Old-Growth Forests: Analysis of Threats on Lands Managed by the Forest Service and Bureau of Land Management report compared changes in mature and

old-growth forest within and outside of reserved areas (Figure 4; USDA FS 2024b). Over nine years, mature forests in reserved areas declined by 10% due to the impacts of wildfire, insects, and disease (with marginal decreases in old growth, as well), while old growth in non-reserve areas increased by 8%. These results suggest that strictly reserving forests within no- management zones may not ensure that old growth is protected from future threats like wildfire. Furthermore, the 10% loss of mature forests due to the impacts of wildfire, insects and diseases, reflects a truly lost opportunity.

For this work that makes Alternative 2 effective to be implemented, it will need to be backed up by the legal and regulatory frameworks that allow the Forest Service to carry out these amended plans.

Concern about Vulnerable Old Growth in Reserves

For these reasons, Alternative 2's emphasis on proactive stewardship to restore and maintain old-growth forests

is commendable and aligned with the best available science (including Indigenous Knowledge), as well as our Active Conservation Management work for benefit of the O&C Lands. However, Forest Bridges has concerns about the feasibility to implement Alternative 2 at scale across the National Forest System because, according to recent inventories, 56% of all

old growth within the National Forest System is situated within reserves or roadless areas, and an additional 25% is contained in the WUI (USDA FS 2024a).

Current regulatory guidance effectively limits the amount and extent of urgently needed treatment across the planning area to only ~45% of old-growth forest within the National Forests and presents management challenges in old-growth areas close to urban and suburban areas where prescribed fire is less

accepted (Stephens et al. 2016). Modifying laws and regulations to increase the use of prescribed fire (Hessburg et al. 2020) as a tool of forest restoration and working to update reserve models to include proactive stewardship in their conservation strategies would be welcome additions to the framework of Alternative 2. (See also the barriers bulleted on page 5 of this input.)

To carry these ideas one step further, Forest Bridges views the reserves, such as Late Successional Reserves in the Pacific Northwest, as an outgrowth of the 1990's search for a solution in a time of transition from active timber management that focused on timber harvest to Active Conservation Management and Ecological Forest Management to sustain habitats and return to precolonial historic densities and composition of forests. As our understanding of forest complexities and vulnerabilities has developed, and thirty years of reserves have significantly fallen short of achieving ESA protections and fire resilience goals, these reserves have outgrown their usefulness. Still, regulatory and legislative guidance needs to catch up with our understandings from science and Indigenous Knowledge today to make the implementation of Alternative 2 effective.

Figure 3. After nine years of measurement, a recent USDA FS report revealed that mature and old-growth forest in no-management reserves actually lost more acreage to disturbances like wildfire than those forest stands that were subject to management (USDA FS 2024b). While mature and old-growth forest outside of reserves actually increased in this nine-year period, there are lost opportunities for old-growth forest accumulation due to the losses in reserves as well as outside them.

While the proposed amendment is focused on old growth within the National Forest System, it also acknowledges that there is no universal definition of "old growth" that applies to all forest types. The Forest Service drew from The Mature and Old-Growth Forests: Definition,Identification, and Initial Inventory on Lands Managed by the Forest Service and Bureau of LandManagement technical report (FS-1215a) document to help define the old-growth narrative framework, as follows:

Old-growth forests are dynamic systems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics, which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function (USDA Forest Service 1989).

In addition to their ecological attributes, old-growth forests are distinguished by their ecosystem services 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. Dialogue with stakeholders and Tribal Nations and integration of local and Indigenous Knowledge with evolving scientific understanding are critical in identifying and stewarding old-growth forests. (p. 5)

Forest Bridges agrees with most of this old-growth definition but would amend a few of the descriptors: "late" not "later" stages of stand development; "large decaying woody material" not just "dead woody material"; "multiple canopy layers" not just "number of canopy layers"; and "ecosystem function that is more stable and relies on a diversity of biological species both above and below ground" rather than just "ecosystem

function." We agree with the Forest Service when it asserts that old-growth characteristics have broad variation depending upon ecosystem, species, and region (USDA FS 2024a). They can also change over time because old growth, like other ecosystems, are dynamic and transitional due to natural disturbances like wildfire, insects, and disease.

The amendment proposes constraints on limiting the purposes of certain forest treatments, but it also

recognizes that forest stands should be managed outside the purview of the amendment if they can no longer meet old growth criteria after disturbance (e.g., after stand-replacing fire). In the view of Forest Bridges, all stands, including those reclassified, should be managed for their

legacies, as they have the potential to again become old growth, over time, and may be the old- growth forests of the future.

Forest Bridges' Burned Forest Restoration Strategies for Consideration

Forest Bridges addresses the case of an old-growth (or other) forest burned over 90%, severely and as a stand-replacement fire. In order to conserve legacy, yet still reduce the probability of reburn, and to increase the ability of firefighters to fight a reburn, which severely destroys forest soils, we offer its collaboratively developed Burned Forest Restoration Strategies:

* In the Moist Forest, Forest Bridges proposes a substitution of up to 50% of the green tree harvest strategy of a forest plan onto the stand-replacement (greater than 90% burned) fire area, using similar retention standards as found in the green forest plan. That includes retaining all green trees and the remainder in burned snags, leaving 25-40% of the total basal area behind. This will include many of the largest burned trees. Then the Restoration Variable Retention Regeneration Harvest would remove the remaining 60-75% of the total basal area of the stand. This strategy retains burned tree legacy, any live trees for natural reseeding, supplemented by tree planting to regenerate the forest. In the case of a reburn, this strategy creates areas available without overhead snags where firefighters can successfully defend against reburn. Without active harvest in burned areas, they soon become unsafe to enter, and fires burn destructively, hot and destroy soils along with any remaining green vegetation, due to all the dead fuel and mortality from the prior fire.
* Similarly for the Dry Forest, Forest Bridges proposes that its dry forest strategy be overlaid on any moderate- to high-severity burn areas where a reburn has a greater than 50% chance of being a stand replacement fire, using the same variable retention thinning approach and relative density retention standards, as well as planting as needed where there is no natural overhead source of seed.
* The Transitional forest would be a blend of moist and dry strategies as described earlier.

These strategies are further described and validated on the Forest Bridges website: https://www.forestbridges.org.

The proposed Old Growth Amendment is only reasonable as part of a whole-forest proposal as would be developed in forest planning. It does not prescribe recruiting a balance of successional stages towards old growth as a final outcome of management. It promotes old growth to the exclusion of other seral stages that are also important to ecosystem structure, function, composition, and integrity at broader scales. Indeed, early seral gaps in mature or old-growth forest provide resources that attract and sustain high species diversity, high productivity of herbs and shrubs, complex food webs, large nutrient fluxes, and high structural complexity in both western (Swanson et al. 2011) and eastern forests (Greenberg et al. 2011, King et al. 2014).

The Importance of Developing Other Seral Stages at the Same Time As Developing Old-Growth to Lend Heterogeneity and Biodiversity to the Whole Forest

Forest Bridges finds the promotion of old-growth to the exclusion of developing other seral stages at the same time to be a weakness in the proposed Old Growth Amendment. Our approach, which is a model designed specifically for the O&C Lands of western Oregon, does promote the development of old-growth while including appropriate levels of other seral stages and distribution. For example, Forest Bridges Moist Forest Strategy for O&C Lands provides a management approach to create a metered, limited amount of early seral areas, always with legacy, that grow into later seral stages, in balance with a forest trajectory to be 50% Old growth and 50% all other seral stages. While tailored specifically for the O&C Lands, it does offer an application of the old-growth strategy at the planning level.

Forest Bridges supports the amendment's emphasis on ecosystems within the Federal forest ownership for conservation (and when willing neighbors present themselves, volunteer multi- ownership contexts could exist),

in contrast to focusing on individual species or seral stages at the expense of other seral stages that lend heterogeneity and biodiversity to the "whole."

Indeed, a focus on individual species or resources can often lead managers to consistently overlook the broader "endangered landscape" and multiple species (not yet listed but) in peril due to the departed conditions of the forest from a historical balance of seral stages (Stephens et al. 2016). For instance, megafires that burn old-growth forests pose an existential threat to Northern Spotted Owl (NSO), contributing to population declines and rendering large areas unsuitable for foraging even one year after a fire (Jones et al. 2016). However, singular focus on the conservation of NSO (via the Endangered Species Act, for instance, over the last 30 years) created disincentives to proactively treat old-growth forests despite the severe risk of long-term

habitat loss when wildfire occurs after periods of fire exclusion. An approach that focuses on restoring natural ecosystem processes (and simulating them using thinning and prescribed fire-- including pile burning along vulnerable boundaries as explained earlier in this paper) is likely to provide higher net conservation success than directing resources toward managing and regulating single-species actions (Henson et al. 2013, Henson et al. 2018). By managing for the full suite of seral stages and maintaining management flexibility as opposed to static definitions or approaches, Alternative 2 will be more successful in achieving desired conservation outcomes than other Alternatives or reserve-based models - if the regulatory climate is modified so it can be implemented.

The Forest Bridges Principle of Short-Term Costs for Long-Term Gains

Another aspect of intelligent forest management that Alternative 2 promotes is acknowledging the necessity of short-term costs for long-term gains, which is also one of Forest Bridges' Principles of Agreement. Active Conservation Management activities such as mechanical thinning and prescribed fire (described above) incur short-term impacts like reduced aesthetic values during and after mechanical harvests and smoke or sedimentation after burning. However, these short-term effects are dwarfed by the long-term and enduring potential benefits to climate resilience, wildlife habitat, and ecosystem services (USDA FS 2024a). Ecological silviculture and prescribed fire are invaluable tools to restore and maintain resiliency in old-growth forests into the future (Davis et al. 2024, Eisenberg et al. 2024, Hanberry et al. 2020).

For example, a recent meta-analysis found overwhelming evidence that thinning combined with prescribed fire reduces subsequent wildfire severity by up to 72% compared to untreated areas (Davis et al. 2024). Some smoke produced by prescribed fire is the short-term cost of minimizing the future intensity of tremendous quantities of smoke associated with severe wildfire during fire season. Indeed, PM2.5 concentrations from wildfire can be reduced by up to 41% if fuel treatments like prescribed fire are implemented prior to the burn (Graw & Anderson 2022). This trade-off is true from a carbon perspective, as well: enhancing long-term forest resilience and carbon stabilization (preventing or mitigating large wildfires) has short-term carbon losses but yields long-term carbon benefits over time, including from harvested wood products (Krofcheck et al. 2019, Puhlick et al. 2020). In this regard, Forest Bridges enthusiastically supports proactive stewardship as a present-day investment in future resilience and climate stability. Furthermore, Forest Bridges strongly supports that all fire season wildfires should be aggressively fought during

initial attack and subsequently. As stated elsewhere Forest Bridges opposes managed suppression in fire season.

Alternatives 3 & 4: Unable to Meet Amendment Objectives

With the caveats explained above, Forest Bridges agrees with the US Forest Service that Alternatives 3 and 4 will not be as successful in meeting old growth management objectives as Alternative 2.

Alternative 3 prohibits commercial timber harvest as a tool for proactive stewardship, which would reduce the rate of fuels treatment and subject old-growth stands to higher fire risk. Forest Bridges is in agreement with the authors of the amendment when they write that "from an ecological perspective, the anticipated negative effects of reducing the rate of proactive stewardship by limiting vegetation management tools (such as thinning and prescribed fire)[hellip] likely outweighs any potential benefits of ensuring that commercial timber harvest does not negatively influence old-growth management decisions" (USDA FS 2024a).

The negative effects of Alternative 3 are not only a lack of revenue generation from commercial harvest and thinning in forests (and sometimes in conflict with prior law, such as the 1937 O&C Act), but the failure to reduce densities of competing trees including fire-sensitive species that have developed during 115 years of fire suppression. Another disadvantage is that prohibiting commercial harvest can preclude the implementation of prescribed fire if there is no option to pre-thin before burning. Besides the density issue impact on stress and competition for resources, many forest stands are too dense for prescribed fire application without prior thinning to mitigate the risk of fire damage (Ager et al. 2013), and many of these in-filling, fire-sensitive trees (e.g., grand fir, white fir or cedar in the Pacific Northwest, red maple in the Eastern United States) become quite large due to fire exclusion in forests that were once historically open- canopied (Hessburg et al. 2016). For example, Levine et al. (2020) found that reintroducing prescribed fire without pre-thinning in a Sierran mixed-conifer stand after more than 100 years of fire exclusion yielded 65% total fuel consumption, amounting to excessive damage. In this way, prohibiting commercial timber harvest abandons its useful role in supporting proactive stewardship and wildfire resilience within old-growth landscapes.

Alternative 4 is considered the least restrictive proposal with respect to timber harvest as it allows for timber harvest as a management objective alongside[mdash]and even as higher priority

than[mdash]proactive stewardship. While this alternative would yield the second-fastest rate of restoration and progress towards desired forest conditions, timber harvest is the primary driver of forest management within this approach, and therefore, treatments may not be optimized for old-growth forest development, or, of equal concern, fire resistance and resilience of remaining stands.

Old Growth Forests in General

Forest Bridges expertise is focused on the O&C Lands which are part of the Pacific Northwest forests, and while there can be risks to comments outside one's area of expertise, here are a few comments that apply more broadly across the United States.

Mesophication in wetter, eastern forests is increasingly demanding similar approaches as fire- sensitive, shade-tolerant red maple continue to fill in what was historically oak-pine prairie in the absence of regular fire regimes (Figure 3; USDA FS 2024b). Another historic species that was cut out by the earlier settlers in our nation's history and is in short supply is red pine in the Northeast. According to numerous online sources, less than one percent of stands in its historic range remain.

Figure 4. Like western forests in the U.S., eastern forests have also undergone at least a century of fire suppression and subsequent forest transformation as a result of disruption to Indigenous cultural burning

practices. Many written accounts detail the effects of fire exclusion in historically common oak and pine savannas of the eastern U.S. (Notes by Sargent 1884, in USDA FS 2024b; map by Brice Hanberry showing the forest composition in the year 1900, based on tree surveys conducted between 1620 and 1900).

Forests considerably out of alignment with their precolonial conditions over a large area require years to be adjusted. As mentioned above, Forest Bridges chose a 30-year restoration timeframe to address ahistorical conditions using thinning and prescribed fire, with skips and gaps, over approximately 1.3 -1.5 million acres of dry forests of O&C Lands in western Oregon. This is intended to be somewhat rapid to get ahead of and begin to reverse the increasing high-severity wildfire trend yet provide a predictable year-over-year program to allow agencies, communities and local industry to develop and maintain predictable ongoing programs that are needed for orderly management.

Threats to old-growth systems are varied from region to region. For example, some old-growth stands only exist due to long-term, ahistorical fire suppression that has resulted in compositions and structure outside the normal fire regime (Figure 4, Quote 2 above, USDA FS 2024a). Thus, these stands do not represent ecologically desirable old-growth. They are also characterized by their novel vulnerability to high-severity wildfire (e.g., shade-tolerant, fire-sensitive species like red maple). In the case of the Pacific Northwest, there has been considerable infilling (or A.K.A, densification), as evidenced by comparing Osborne panorama photos of forested areas taken in the 1930s and early 1940s and contemporary versions taken by wildlife ecologist and landscape photographer John Marshall. Figure 5 below tells such a story not only of this densification but of compositional and structural simplification.

Figure 5. Before and after panoramic photos on the Noti Fire Lookout Site, in the Coastal Range of western Oregon near Eugene, illustrates changes in moist forest composition and density between 1940 - 2022. On top, a 1940 photo (part of the Osborne Panoramas Historical Collection) shows a multi-species landscape, with a tall legacy backbone and resilience to fire. At bottom, photo taken by John Marshall on 9/22/2022, shows densification and homogeneity of the same moist forests over the decades since the 1940 panorama was taken. Photos provided for Forest Bridges' use: courtesy John Marshall.

Furthermore, overdense Douglas-fir needs to be thinned to leave the very oldest best trees, in line with densities from precolonial times and remove the rest, along with shade-tolerant fire- sensitive species, regardless of size that are also artifacts of fire suppression.

The proposed Old Growth Amendment plan also provides for the recognition and retention of old trees that have cultural or historical value, and that exist outside the primary old-growth area. In this way, there is no single, proposed management prescription that applies to all old growth in National Forests. Instead, the amendment directs management to be based on local or regional definitions that align with the best available science (including Indigenous Knowledge) and the adaptive flexibility to amend management plans as needed.

Forest Bridges' strategy of prescribed fire (e.g., targeted pile and broadcast burning following thinning or harvest depending upon the forest type, topography and conditions) and snag retention in checkerboard ownerships typical of the O&C Lands of western Oregon, are applicable anywhere there is a checkerboard of federal land intermingled with private or other non-federal land, or for that matter, wherever there is a boundary between Federal land and private or other non-federal land.

These strategies should be considered and funded to promote sustainable forest ecosystems at a time when natural fire is suppressed, and fuels and tree densities develop well beyond the natural condition. The practice of prescribed fire will require significant resources, both human and financial. Fire suppression crews, who are already trained in fire work, will provide a ready, trained human resource for this work. A prescribed fire program as outlined provides long seasons of work in preparation and burning, over large areas.

Honoring Indigenous Knowledge & Proactive Co-Stewardship

Forest Bridges wholeheartedly supports and commends the incorporation of Indigenous Knowledge (IK) and tribal leadership within the proactive stewardship framework to restore and conserve old-growth forests in the National Forest System. Indeed, the protection of old growth may not be possible without tribal co-management and the integration of Indigenous practices into existing conservation strategies. Colonization that began with European appearance in the Americas caused disease and genocide of Native peoples[mdash]along with subsequent governmental fire suppression[mdash]led to significant Indigenous population declines, the absence of Indigenous practices across the lands that have dramatically impacted Indigenous culture and foodways, as

well as forest health and resilience of forests more broadly. Contemporary threats to climate and forest health require reinstating the ecocultural practices that can restore historical disturbance regimes and resilience.

Dominant conservation policy still largely fails to recognize that Indigenous people have revered, stewarded, and shaped biodiverse forests for at least 12,000 years, and that many of our most treasured landscapes are, at present, not self-sustaining: They had been tended and maintained by generations of Indigenous peoples through observation, experience and oral history over time, cultural burning, and plant selection (Anderson & Barbour 2003, Ellis et al. 2021). These practices of Active Conservation Management are at odds with preservation values of the

colonial period that created a dualism between humans and nature, positing forest health as a natural byproduct of unmanaged, self-determining landscapes (USDA FS 2024a). But the ideals of protecting a pristine "wilderness" free from human influence has, ironically, degraded the ecological condition of many landscapes while, at the same time, denied Indigenous people agency, access rights, and the furtherance of their ecological wisdom in conserving their unceded territories (Fletcher et al. 2021). And while networks of large reserves may still be needed in some areas to conserve biodiversity in the context of climate change (Watson et al. 2014), Forest Bridges believes that the most successful conservation outcomes, at least in the Pacific Northwest where we are familiar, arise from active maintenance and co-management with Tribal partners to steward natural and cultural resources, using Active Conservation Management.

Indeed, conservation outcomes can be just as successful (or more so) when landscapes are managed by (or in a manner reflecting the historic precolonial densities and frequent fire carried out by) Indigenous people, than when they are locked away in reserves (Fa et al. 2020, Schuster et al. 2019). In Oregon, for example, old-growth forests have declined by 9.5% within the Northwest Forest Plan's no-management model of reserves (Spies et al. 2006). Furthermore, wildfire has emerged as the primary cause of NSO habitat loss in southwest Oregon (Davis et al. 2022, Noon & Blakesley 2005)[mdash]a phenomenon that requires active restoration to resolve (Hysen et al. 2023). Protecting old-growth forests thus demands reckoning with notions that have predominated over the last 100 years: developing reserve systems based on the deeply held values around separating humans from nature for a perceived ecological benefit that actually does not exist.

The priorities articulated within the proposed amendment closely mirror the five critical resilience recommendations described in Braiding Indigenous and Western Knowledge for Climate-Adapted Forests (2024), of which Forest Bridges is an ardent supporter (Eisenberg et al. 2024):

* Adopt proactive stewardship
* Recognize and respect Tribal Sovereignty and Indigenous Knowledge

* Establish government-to-government co-stewardship partnerships at the local and regional levels with individual Tribal Nations at all stages of policy development, planning, monitoring, decision-making, and adaptive stewardship.

* Provide the flexibility to steward dynamic landscapes and navigate uncertainties under rapidly changing conditions

*
* Management for static landscape conditions has been ineffective with respect to halting disturbance. Especially under climate change, high-severity fire, drought, and insect disturbances cannot be prevented in areas prioritized for mature and old-growth forest conservation. All landscapes, even designated reserves, are dynamic.

* Establish a grounding of agency planning, and land and resource stewardship policies in the ethics of reciprocity and responsibility to many future human generations

* Catalyze innovative approaches to forest stewardship

These values are upheld in the proposed amendment through the acknowledgement that Indigenous Knowledge is equal to the value of western scientific knowledge, the prescription of identifying and promoting culturally significant plant and animal species within the planning areas, and the codification of initiating at least one co-stewardship agreement with interested Tribes (on their terms) in the first two years of plan implementation. The Tribal forum conducted as part of the amendment process reinforced many of these ideals, as Tribes identified relevant themes to help inform the amendment. These included (USDA FS 2024):

* The need to build more time for effective consultation
* More funding for Tribal participation
* Revitalizing cultural burning
* Management for biodiversity
* A variety of species and age classes preferred through forest management
* The need for deep conversations about Indigenous Knowledge and its complexity

Conclusion

In the preceding pages, Forest Bridges: the O&C Forest Habitat Project provided an in-depth analysis of the draft EIS for the Old Growth Amendment, with special emphasis on highlighting the merits of Alternative 2, the Forest Services' preferred alternative, while also providing several recommendations to help strengthen it to better meet the purposes of conserving, stewarding, recruiting and monitoring old-growth forests in National Forests. In conducting our analysis and developing our recommendations, we applied, and shared in some detail, our collaboratively developed, Western and Indigenous science-based Active Conservation Management framework for the O&C Lands of western Oregon. These lands include 500,000 acres managed by the Forest Service (in six national forests) and 2.4 million acres managed by the Bureau of Land Management. We also provided some broader ideas applicable on a national scale.

In our comments we provided numerous examples of how "Forest Bridges: The O&C Forest Habitat Project's Active Conservation Management" framework aligns with the Forest Service's "proactive stewardship" aims and approaches for managing old-growth, including

* promoting ecologically focused, adaptive management that treats as many vulnerable acres as possible to confer climate change and fire resilience (i.e., addressing the highest contemporary threats to old-growth forests: severe wildfire, followed by insects and disease);
* establishing roles for Indigenous Knowledge and tribal leadership in the proactive stewardship of these important ecosystems; and
* applying a range of treatment tools--prescribed fire, timber harvest, hazardous fuels reduction via thinning, wildlife habitat improvement, and other vegetation management that aligns with restoration and resilience objectives.

Despite these alignments and our enthusiasm for this proposed shift from passive, reserved- based conservation to an approach similar to our engaged, Active Conservation Management, Forest Bridges identified and called out several key concerns regarding Alternative 2 and offered informed recommendations, which included:

* expand the dimensions of "proactive stewardship" in promoting the composition, structure, pattern and ecological processes necessary for resilient old growth by including

the goal of restoring stands to precolonial fire-resistant stand densities, composition, and structure;

* include a provision for ALL stands in a National Forest, including old-growth stands reclassified following disturbance, to be managed for their legacies, as they have the potential to become old-growth over time and may be old-growth forests of the future;
* at the same time old-growth is being recruited and sustained, include a provision for the development of all other seral stages--at an appropriate level and distribution;
* consider adopting Forest Bridges' process for prescribed fire and snags in checkerboard land ownerships, like the O&C Lands[mdash]i.e. pile and broadcast burning following mechanical thinning that mitigates fire escape from public lands to adjacent private or other lands, as well as retains snags in a manner that simultaneously supports ecological objectives (e.g., for wildlife habitat creation) and safety objectives (e.g., for firefighting);
* consider adopting Forest Bridges' Burned Forest Restoration Strategies specific to dry and

moist forests;

* consider applying both the five critical resilience recommendations in Braiding Indigenous and Western Knowledge for Climate-Adapted Forests (2024) and the Tribal Forum's relevant themes;
* in view of the legal and regulatory barriers that prevent restoration in reserves, roadless areas and the WUI: include in the Alternative 2 Framework the need for modifying laws and regulations to increase the use of thinning and prescribed fire tools for forest restoration and the need to update reserve models to include proactive stewardship in conservation strategies;

As with any paradigm shift to 21st century forest management, we also have advised that carrying out the explicit purposes of the policy changes proposed in this Old Growth Amendment will also require funding for Active Conservation Management treatments at a level needed to accelerate restoration and sustainability of old-growth and other seral stages in National Forests, in line with the ecosystem services these forests provide.

In closing, we wish to emphasize that Forest Bridges believes that the most successful conservation outcomes, at least in the Pacific Northwest where we are familiar, arise from active restoration, maintenance and co-management with Tribal partners to steward natural and cultural resources, using Active Conservation Management approaches specific to forest types. We have in our comments above laid a solid foundation for rethinking protection of old-growth forests, which ultimately means reckoning with notions that have predominated over the last

100 years: developing reserve systems based on the deeply held values around separating humans from nature for a perceived ecological benefit that actually does not exist.

Thank you for taking the time to read our comments and for your efforts to finalize the Old Growth Amendment. You can reach us at our email, info@forestbridges.org, to answer any questions. Please note that together with this document, we have uploaded to the project portal a copy of our NWFP Amendment comments and our Principles of Agreement for your reference.

The Forest Bridges Team September 16, 2024

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ATTACHMENT: Attachment 1_Forest Bridges'response to the USFS_Draft OLD Growth Amendment DEIS_9-16-24.pdf - comments sent February 2024

ATTACHMENT: Attachment 2_ FB's public comments_US Forest Service NOI for an EIS to Ammend the NWFP(final) 2.pdf - this is the same content that is coded in text box; it was also included as an attachment

ATTACHMENT: Attachment 3_Forest Bridges' Principles of Agreement.pdf - Forest Bridges principles of agreement