Data Submitted (UTC 11): 3/14/2025 4:00:00 AM
First name: Fiona
Last name: Noonan
Organization: Central Oregon LandWatch
Title: Wild Lands and Water Program Manager
Comments: Please find Central Oregon LandWatch's comments on the NWFP Amendment DEIS attached.

March 14, 2025

Filed via online comment system: https://cara.fs2c.usda.gov/Public/CommentInput?Project=64745

Jacqueline Buchanan, Pacific Northwest Regional Forester Jennifer Eberlien, Pacific Southwest Regional Forester United States Forest Service

1220 SW 3rd Avenue, Ste. G015 Portland, OR 97204

Re: Comments on Northwest Forest Plan Amendment Draft Environmental Impact Statement Regional Forester Buchanan and Regional Forester Eberlien,

Central Oregon LandWatch submits these comments in response to the Draft Environmental Impact Statement ([ldquo]DEIS[rdquo]) for the Northwest Forest Plan Amendment ([ldquo]Amendment[rdquo]), which was published in the Federal Register on November 15, 2024.

Central Oregon LandWatch ([ldquo]LandWatch[rdquo]) is a conservation organization which has advocated for preservation of natural resources in Central Oregon for over 35 years. With over 950 members in Central Oregon, LandWatch has a long history of protecting the forests and streams in and around the Deschutes National Forest and other lands managed under the Northwest Forest Plan ([ldquo]NWFP[rdquo]). LandWatch[rsquo]s members and supporters live in Central Oregon, including on lands adjoining the Deschutes National Forest, and recreate in the Crescent, Fort Rock and Sisters Ranger Districts. They hunt, fish, take photographs, view wildlife, hike, drive, and engage in other recreational activities on National Forest lands, generally, and on lands within the boundary of the NWFP area specifically.

LandWatch[rsquo]s comments are focused on the NWFP area east of the Cascade Crest and primarily within the Deschutes National Forest, an extremely varied Central Oregon landscape ranging in elevation from 10,358 feet to 2,900 feet, and encompassing a broad spectrum of wildlife, plant groups, forest composition types, and fire regimes. Notably, it contains areas considered [ldquo]dry forest,[rdquo] as well as areas of [ldquo]moist forest[rdquo] or mixed moisture composition.

Recent forest management projects on the Deschutes National Forest are often framed in terms of [ldquo]forest restoration,[rdquo] with a narrow purpose and need centered reducing fuels and mitigating the perceived threat of extreme wildfire behavior.1 The over-reliance on fuels-centric projects, however, is leading to an artificial ceiling on forest restoration efforts, the misapplication of treatments in the context of place, and increasing controversy in the Central Oregon region related to the management of National Forest lands.

---

1 Examples include: Green Ridge Landscape Restoration; Cougar Rock Restoration Project; West Bend Vegetation Management Project.

While there is broad consensus that some ponderosa pine and dry-mixed coniferous forests under the NWFP are in a degraded state, defining the purpose and need for restoration is not without controversy; the when, where, why, and how to restore forest ecosystems east of the Cascades continues to be highly debated in scientific, public, and policy forums. The Forest Service[rsquo]s often narrow focus on reducing fuels to restore forest condition fails to address the full suite of factors that have fundamentally changed disturbance regimes and degraded forests. Further, a fuels-centric approach has significant tradeoffs for fish and wildlife, plant community pattern and composition, and is unlikely to meaningfully influence the 2 percent of fires that burn most forested acres.

In updating the NWFP, LandWatch continues to urge the Forest Service to consider establishing forest plan standards and other sideboards that help re-calibrate forest management and restoration projects east of the Cascades[mdash]especially where projects propose to address large-scale risks such as wildfire[mdash]and embrace a more balanced forest management framework that centers on ecological restoration and drivers of degradation. This framework should limit large tree logging, grazing, and road networks, reintroduce keystone species such as beaver, and balance the benefits of fire against its continued exclusion.

The United Nations Convention on Biodiversity has defined ecological restoration as:

the process of managing or assisting the recovery of an ecosystem that has been degraded, damaged or destroyed as a means of sustaining ecosystem resilience and conserving biodiversity. Degradation is characterized by a decline or loss of biodiversity or ecosystem functions. Degradation and restoration are context-specific and refer to both the state of ecosystems and to ecosystem processes.2

Similarly, Stine et al. (2014) defined ecological restoration as:

the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Ecological restoration focuses on re-establishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience, and health under current and future conditions.

Recalibrating forest management to lead with ecological restoration is necessary to facilitate terrestrial and aquatic ecosystem resilience and health under current and future conditions. Further, by taking a more balanced approach to fuels management, restoration efforts can better address ecological concerns related to forest ecosystem structure, process, pattern, and composition, improve forest resiliency in the face of climate change, and decrease the level of controversy around federally managed public forests.

LandWatch appreciates the Forest Service[rsquo]s stated goal of implementing NWFP updates that reflect evolving social and ecological realities. However, the alternatives presented in the DEIS ultimately fail to lead with ecological integrity and resilience and largely propose to perpetuate a counter-productive fuels-

---

2 UN Conference of the Parties to the Convention on Biological Diversity (2016). Ecosystem restoration: short-term action plan. https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-05-en.pdf.

---

centric approach to forest management east of the Cascades.

In amending the NWFP, LandWatch urges the Forest Service to consider a more balanced approach to forest management and restoration that builds upon the core tenets and purpose of the 1994 plan, while beginning to rectify the exclusion of Tribes in the original NWFP. To that end, our comments focus on strengthening key management standards and sideboards around four themes: 1) ensuring that fuels- reduction efforts and timber harvest do not further degrade ecological integrity, wildlife habitats, and other key forest values; 2) meaningfully including Tribes, establishing co-stewardship, and respecting sovereignty; and 3) safeguarding mature and old-growth forests while improving our understanding of forest treatment outcomes in a changing climate.

The DEIS fails to offer a suite of updates that would cohesively solve any of these key social-ecological concerns, and fails to uphold the 1994 NWFP[rsquo]s original purpose, need, and spirit, which is a disservice to the communities and wildlife habitats in and around the NWFP planning area.

I. AMENDMENT PURPOSE AND NEED

The DEIS states that the purpose of the Amendment is:

to amend, all or part of 17 national forest land management plans, as amended, within the NWFP area to establish new or modify existing plan components to better enable the Forest Service to meet the original intent of the 1994 NWFP to conserve mature and old-growth ecosystems and habitat for the conservation of northern

spotted owl and other Endangered Species Act (ESA) listed and non-listed species, protect riparian areas and waters, and provide a sustainable supply of timber and non-timber forest products. (DEIS at 1-4)

The DEIS describes the need for the NWFP Amendment process as [ldquo]driven by evolving ecological understandings and the need for the Forest Service to adapt their management strategies to current and future challenges[rdquo] (DEIS at 1-5). This need comprises five key focus areas: (1) wildfire resistance and resilience; (2) climate change adaptation; (3) conserving and recruiting mature and old-growth ([ldquo]MOG[rdquo]) forests, ensuring habitat for species dependent on MOG systems, and supporting biodiversity; (4) Tribal inclusion and incorporating Indigenous Knowledge into project planning and implementation; and (5) supporting the economic sustainability of communities near the NWFP planning area through a [ldquo]predictable supply[rdquo] of timber and non-timber products (DEIS at 1-5).

The purpose and need ostensibly align with the intent of the 1994 NWFP while acknowledging the need to adapt to shifting climatic, ecological, and social conditions and to include Tribes in NWFP development and implementation. However, the analysis contained within the DEIS fails to demonstrate that any of the Alternatives[mdash]including and especially the Proposed Action Alternative[mdash]would meet all of these needs. Instead, the DEIS continues to focus largely on logging to achieve unfounded fuels treatment targets, with no compelling evidence of the co-benefits to long-term wildfire resilience, climate change adaptation, mature and old-growth stands, threatened and endangered ([ldquo]T&E[rdquo]) species, biodiversity, or local

economies. In fact, the DEIS repeatedly acknowledges the potential for the Alternatives to result in habitat degradation and fails to make the case that forest and non-forest products from the NWFP area will be a vital part of sustaining local communities. The DEIS also presents alternatives that would fail to uphold Tribal treaty rights, meaningfully include Indigenous knowledge, or guarantee Tribal co-management.

Ultimately, the proposed approaches in each of the Alternatives are inadequate to meet the Amendment[rsquo]s stated purpose and need. In other words, the DEIS fails to articulate a rational connection between the facts found and the conclusion made.3

II. INADEQUATE RANGE OF AMENDMENT ALTERNATIVES

Despite a vast, interconnected set of issues and goals identified in the purpose and need, the DEIS fails to evaluate a reasonable range of alternatives to fulfill the intent of this complex Amendment in accordance with the National Environmental Policy Act ([ldquo]NEPA[rdquo]).4

In the DEIS, the Forest Service only analyzes four alternatives, including a No Action Alternative ([ldquo]Alternative A[rdquo]), a Proposed Action ([ldquo]Alternative B[rdquo]), and two action alternatives. By contrast, the 1994 NWFP considered and analyzed ten alternatives that covered a broad range of possible approaches to achieving the NWFP[rsquo]s original purpose and need. Even within the four alternatives, with

regard to key issues such as age thresholds for logging late-successional and old-growth ([ldquo]LSOG[rdquo]) stands, there are functionally only two alternatives. Of the four alternatives presented in the Amendment DEIS, the key proposed management thresholds and objectives for LSOG in dry forest Late-Successional Reserves ([ldquo]LSR[rdquo]) and Matrix are the exact same in Alternatives A and C; the proposed thresholds in Alternatives B and D are also identical to one another. Effectively, this means that the Forest Service only analyzed two alternatives connected to one of the NWFP[rsquo]s core issues: conservation of mature and old-growth trees.

Courts have previously determined that where the Forest Service considered only a no-action alternative (in this DEIS, Alternative A and the identical Alternative C), and [ldquo]two virtually identical alternatives[rdquo] the agency [ldquo]failed to consider an adequate range of alternatives.[rdquo]5 Although there is no NEPA requirement for the minimum number of considered alternatives, an EIS that considers only two reasonable alternatives will rarely satisfy the statute[rsquo]s [ldquo]hard look[rdquo] standard.6

NEPA requires federal agencies to include a detailed statement on [ldquo]a reasonable range of alternatives to the proposed agency action,[rdquo] and Forest Service regulations require an EIS to [ldquo]document the examination of reasonable alternatives to the proposed action,[rdquo] which [ldquo]should meet the purpose and need and address one

---

3Mtr. Vehicle Mfrs. Ass[rsquo]n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (The agency must [ldquo]articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.[rdquo])

4 42 U.S.C. [sect] 4332(2)(H)

5Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 813 (9th Cir. 1999)

6Native Ecosystems Council v. U.S. Forest Serv., 428 F.3d 1233 (9th Cir. 2005)

---

or more significant issues related to the proposed action.7 To amend the NWFP in line with the DEIS[rsquo]s purpose and need, and comply with federal law, the Forest Service must analyze alternatives encompassing a range of additional potential activities, standards, guidelines, and desired conditions. For example, the Forest Service did not consider any alternatives that would eliminate commercial logging, eliminate salvage logging, emphasize managed wildfire, or holistically prioritize habitat conservation and restoration for the suite of important forest species beyond northern spotted owl. The Forest Service also did not consider a set of alternatives that would equally uphold Tribal treaty rights, ensure Tribal inclusion, establish durable co-stewardship, and elevate Indigenous Knowledge. Instead, the three action alternatives manufacture a trade-off between actively managing forests and fulfilling the agency[rsquo]s trust responsibilities.

At minimum, the Forest Service should have included at least one alternative considering and analyzing the following for the treatment of dry forests and/or forests east of the Cascades:

* Maximizing recruitment and retention of mature and old-growth trees and forests by only harvesting trees younger than 80 years.
* Mechanical treatment methods that only use thinning from below.
* Retaining all trees greater than or equal to 20 inches diameter at breast height ([ldquo]DBH[rdquo]).
* Eliminating post-fire salvage logging.
* Prioritizing gappy-patchy-clumpy forest composition outcomes to support wildlife habitat needs, and in alignment with site-specific local information about best ecological practices.
* Retention of known migration corridors for terrestrial wildlife species, such as mule deer and elk. This would include considering an alternative to retain 20-40% cover in all known corridors as indicated by GPS collar data, mapped Oregon Department of Fish and Wildlife ([ldquo]ODFW[rdquo]) Priority Wildlife Connectivity Areas ([ldquo]PWCA[rdquo]), or equivalent data-driven information.
* An alternative that does not contain arbitrary targets for the number of acres treated per decade. Treatment acreages should be site-specific, project-level decisions.

III. MEANINGFUL PUBLIC REVIEW AND INFORMED AGENCY DECISION-MAKING

a. Incomplete and Inaccurate Environmental Baseline

The Forest Service did not provide sufficient data regarding the baseline conditions in the NWFP area to support its conclusions. NEPA[rsquo]s primary purposes are to ensure fully informed decision-making by the agency and to provide for public participation in the environmental analysis and decision-making process.8 To achieve these purposes, NEPA requires every federal agency to prepare an EIS for [ldquo]all major Federal actions significantly affecting the quality of the human environment.[rdquo]9 An EIS shall [ldquo]provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the

---

7 42 U.S.C. [sect] 4332(2)(H); 36 C.F.R. [sect] 220.5(e)

8 36 C.F.R. [sect] 220.5(e)

9 42 U.S.C. [sect] 4332(2)(C)

---

reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.[rdquo]10

To comply with NEPA[rsquo]s [ldquo]hard look[rdquo] mandate, an agency must maintain inventories or otherwise collect and disclose information about the resources it manages so that an adequate baseline exists to evaluate the environmental impacts of a proposed action.11 Without establishing the baseline conditions in the Project area before the action begins, [ldquo]there is simply no way to determine what effect the [action] will have on the environment and, consequently, no way to comply with NEPA.[rdquo]12

Among other missing, incomplete, or inaccurate elements of the DEIS baseline, the Forest Service failed to adequately include or consider:

* Barriers to Tribal stewardship, including cultural burning. Despite the centrality of Tribal inclusion to this Amendment process, with cultural burning and beneficial fire at its core, the DEIS does not account for the existing bureaucratic and structural barriers to Indigenous fire use. The DEIS also does not disclose how and where beneficial fire use and other Indigenous stewardship practices will be applied, nor how these will supplant the existing fire suppression paradigm.
* Methodological and spatial information on forest and forest treatment types. The definitions of [ldquo]dry[rdquo] and [ldquo]moist[rdquo] forest provided in Appendix F and the guidelines for distinguishing between these forest types under FORSTW-ALL-GDL provide only the vaguest level of insight into the potential treatment approaches that might be employed under the Amendment (DEIS at A1-15). The process for determining dry or moist forest classifications remains unclear, which makes the coarse-resolution interactive map of dry and moist forest types nearly meaningless in assessing potential impacts of each alternative. The DEIS also lacks any mapping of past burn and vegetation removal areas, which would necessarily inform any analysis of potential impacts to dry and moist forest types.
* Baseline in formation on eastside forest vegetation treatments and effectiveness monitoring. The Forest Service failed to disclose and analyze data on vegetation treatment implementation and outcomes over the first 30 years of the NWFP. This data is critical to inform management in the future, and should necessarily inform priority actions for achieving desired ecological conditions.
* Species distributions and statuses. While the DEIS extensively lists various Threatened and Endangered Species that may occur within the NWFP area (DEIS at 3-52 to 3-55), it does not include baseline information on how the first 30 years of the NWFP has impacted these species in terms of population, distribution, or habitat. Instead, Section 3.5 only offers descriptions of habitat types and vegetation associations and incorporates by reference more detailed accounts of only a handful of species. Appendix C, the Draft Biological Evaluation ([ldquo]BE[rdquo]), lists 776 species that may

---

10 Id.

11 See Neighbors of Cuddy Mountain v. U.S. Forest Serv., 137 F.3d 1372, 1379-80 (9th Cir. 1998).

12Half Moon Bay Fishermans[rsquo] Marketing Ass[rsquo]n v. Carlucci, 857 F.2d 505, 508 (9th Cir. 1988); see also Am. Rivers v. FERC, 201 F.3d 1186, 1195 & n.15 (9th Cir. 2000) (noting that an accurate and complete baseline against which to compare potential effects of reasonable alternatives is [ldquo]critical[rdquo] to the NEPA process).

---

be in the NWFP area, along with their associated habitat types, but does not provide any spatial information on their likely habitat distributions to compare to proposed treatments (DEIS at C-12 to C-57). For all but 9 of these species, the BE determines that the action alternatives will have [ldquo]No Impact[rdquo] or [ldquo]May Impact Individuals or Habitats[rdquo] (DEIS at C-8). However, without any spatial data or underlying analysis to reach those conclusions, this offers no meaningful information to decision-makers or the public.

* Baseline conditions for Northern Spotted Owl habitat. Given the NWFP[rsquo]s intent to protect and increase habitat for Northern Spotted Owl ([ldquo]NSO[rdquo]), it is imperative that the Forest Service disclose and analyze baseline conditions for NSO dispersal, nesting, roosting, and foraging habitats, all of which are central to determining suitable forest management approaches. This is particularly crucial in light of the emerging impacts of climate change and barred owl population expansion on NSO.

* The NWFP[rsquo]s contributions or impediments to climate adaptation. The DEIS lists carbon stocks by National Forest (DEIS at 3-87) and lists treatment acreages (DEIS at 3-93),13 but does not attempt to analyze or quantify how existing or proposed management would influence any part of the NWFP area[rsquo]s capacity to adapt to climate change.
* Wildfire, fuels treatment, and suppression history within the NWFP area. The DEIS centers wildfire as a threat to communities and timber resources and especially highlights the need for fuels treatments in dry forests, yet does not analyze the specific histories of wildfires, logging, restoration work, or suppression activities that might influence shifting fire regimes or management decisions.
* Impacts to aquatic and riparian ecosystems. Although the DEIS does not propose changes to the Aquatic Conservation Strategy ([ldquo]ACS[rdquo]), it also contains no information on past or potential impacts to riparian and aquatic systems within the NWFP area. The proposed increases in logging, including in Riparian Reserves, will inherently affect aquatic ecosystems above and beyond the status quo. It is incumbent upon the Forest Service to fully study and disclose how the various alternatives could impact riparian and aquatic habitats.
* Roads, routes, and trails. The DEIS does not disclose or consider temporary and system road networks, ML 1-5 road densities, user created roads, trail networks, and other relevant data on existing roads and trails.

b. Failure to Disclose, Analyze, and Consider the Reasonably Foreseeable and Cumulative Effects of the Proposed Amendment

The agency must disclose, analyze, and consider the reasonably foreseeable14 and cumulative effects15 of a proposed action. NEPA[rsquo]s [ldquo]action-forcing[rdquo] procedures also require that an agency takes a [ldquo]hard look[rdquo] at the

---

13 Without more information on forest composition or geography, acreage is a relatively meaningless proxy for carbon stores (M.E. Harmon, Deschutes Collaborative Forest Project presentation, February 13, 2025).

14 42 USC [sect] 433(2)(C)

15 36 C.F.R. [sect] 220.4(f)

---

environmental consequences of its proposed action in advance of a final decision.16

The DEIS fails to provide adequate information, evidence, and analysis for the public to assess the potential outcomes of the proposed alternatives. Instead, it relies on simply listing potential actions and biological resources, physically describing geographic areas, and summarizing research without connecting findings to the impacts of the NWFP itself. From these lists and descriptions, the DEIS then offers subjective assessments of potential effects without any data or evidence, nor any information about past and present project implementation within the NWFP area (See relevant discussion in DEIS Chapter 3, at 3-1 to -164). The DEIS also fails to consider the cumulative effects of other land management agency actions, such as the secession of 2.6 million acres of Bureau of Land Management ([ldquo]BLM[rdquo]) land from the NWFP, which has resulted in increased logging of key resources formerly within the NWFP planning area. The Forest Service must consider and disclose the cumulative and reasonably foreseeable effects of increased logging on all federal ownerships as part of the FEIS. Similarly, the Forest Service must account for changes in the federal forest management policy

landscape. The DEIS consistently defers to the National Old-Growth Amendment ([ldquo]NOGA[rdquo])[mdash]which was withdrawn in the final days of the Biden Administration[mdash]for meaningful protections of mature and old-growth trees. The FEIS must account for the reasonably foreseeable effects of NOGA[rsquo]s withdrawal and must adequately protect mature and old-growth trees and forests in the NWFP area in the absence of NOGA.

Concerningly, and as discussed further in sections below, the DEIS also fails to consider the direct, indirect, and cumulative impact of new roads. Roads are necessary to implement any of the alternatives, and to achieve the proposed dramatic increases in treatment acreages. Road construction, therefore, is a connected action that must be considered as part of the NWFP Amendment NEPA review.17

The Forest Service[rsquo]s failure to sufficiently disclose, analyze, and consider the direct, indirect, and cumulative effects of the Amendment violates NEPA and is arbitrary, capricious, an abuse of discretion, not in accordance with, and without observance of procedure required by law.18 Additionally, the Forest Service has failed to demonstrate compliance with the 2012 Planning Rule and the National Forest Management Act.19

i. Simply Listing All Relevant Actions is Not the Same as Cumulative Effects Analysis

The DEIS particularly lacks adequate information on cumulative effects to allow for meaningful public review and an informed decision. The cumulative impact or effect from an action means [ldquo]effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions[hellip]Cumulative effects can result from actions with individually minor but collectively significant effects taking place over a period of time.20 Accordingly, [ldquo][i]n a

---

16Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350[ndash]51 (1989).

17 40 C.F.R. [sect] 1501.3(b)

18 5 U.S.C. [sect] 706(2).

19 36 C.F.R. Part 219; 16 U.S.C. [sect] 1600 et seq.

20 36 C.F.R [sect] 220.4(f)

---

cumulative impact analysis, an agency must take a [lsquo]hard look[rsquo] at all actions[rdquo] that may combine with the action under consideration to affect the environment.21

[ldquo]Simply listing all relevant actions is not sufficient.[rdquo]22 Rather, [ldquo]some quantified or detailed information is required. Without such information, neither the courts nor the public . . . can be assured that the

[agency] provided the hard look that it is required to provide.[rdquo]23 To be useful to decision makers and the public, a cumulative impact analysis must include [ldquo]some quantified or detailed information; . . . general statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided.[rdquo]24

Except for minimal considerations of cumulative effects in Section 3.8 (See DEIS at 3-99, [ldquo]Issue 7 [ndash] Sustainability of Regional Communities[rdquo]), which extends its analysis into 72 [ldquo]NWFP-socioeconomic region counties[rdquo] (despite the NWFP area only intersecting 54 counties across Washington, Oregon, and California), the DEIS fails to address cumulative effects. For the other six key issue areas, the DEIS merely offers the types of [ldquo]general statements about possible effects and some risk[rdquo] that courts have deemed insufficient to constitute a [ldquo]hard look.[rdquo] Section 3.9, [ldquo]Cumulative Effects[rdquo] (DEIS at 3-156) spends four pages listing other land management agencies and types, then simply enumerates some actions connected to each of the seven key issue areas. For each issue area, the DEIS presents no [ldquo]quantified or detailed information[rdquo] before drawing conclusions about action alternatives respective unspecified cumulative effects. For example, Section 3.9.2.2, [ldquo]Issue 2 [ndash] Forest Stewardship,[rdquo] lists potential activities that other agencies could carry out, suggests that agencies may work together cooperatively, and then concludes [ldquo][t]he cumulative effects of the proposed action alternatives as they relate to forest stewardship would be expected to be overall beneficial when combined with other reasonably foreseeable future actions[rdquo] (DEIS at 3-162). This does not constitute any analysis of the cumulative effects of forest stewardship activities and is so vague that it offers no insight to agency decision-makers or the public.

The Forest Service must revise and add to the DEIS[rsquo]s cumulative effects summaries to include detailed descriptions of past and present project activities that have altered the planning area (i.e., the time, type, place, and scale). For example, the cumulative effects analysis should include consideration of:

* Past thinning and forest restoration projects;
* Past maintenance, construction, and temporary construction of roads, routes, and trails;
* Past wildfires and suppression activities;
* Recreation impacts;
* The combined effects of past thinning projects and recreation opening up the forest to higher levels of disturbance that impact wildlife habitats.

21Te-Moak Tribe of W. Shoshone of Nev. v. U.S. Dep[rsquo]t of Interior, 608 F.3d 592, 603 (9th Cir. 2010) (emphasis added).

22Great Basin Res. Watch v. Bureau of Land Mgmt., 844 F.3d 1095, 1104 (9th Cir. 2016)

23Neighbors of Cuddy Mountain v. U.S. Forest Serv., 137 F.3d 1372, 1379 (9th Cir. 1998).

24Ocean Advocates v. U.S. Army Corps of Eng[rsquo]rs, 402 F.3d 846, 868 (9th Cir. 2005) (quoting Neighbors of Cuddy Mountain, 137 F.3d at 1379[ndash]80).

Only after analyzing these additional cumulative effects can the Forest Service fully understand and disclose the reasonably foreseeable effects of each alternative on each resource type n the NWFP.

IV. ECOLOGICAL AND CULTURAL ISSUES

a. Incorporation of Indigenous Knowledge and Increased Tribal Engagement

Central Oregon, including those lands managed by the Forest Service, are the original homelands of the Wasq[rsquo]u (Wasco) and Tana[rsquo]ma (Warm Springs) Tribes. The Klamath and Molalla tribes[mdash]among others[mdash] have also traditionally frequented this area, as have the Nama (Paiute), who were eventually forcibly relocated to the Warm Springs Reservation by the United States government. What we now know as Central Oregon are the ceded lands of the Confederated Tribes of Warm Springs (Wasco, Warm Springs, and Northern Paiute), where they reserve the right to hunt, fish and gather.

LandWatch supports amending the NWFP in a way that recognizes the role Indigenous peoples have played in stewarding forest landscapes, including those east of the Cascades, since time immemorial (Kimmerer & Lake, 2001; Steen-Adams et al., 2019). The final decision must ensure that Tribal inclusion, Tribal sovereignty, and Indigenous knowledge remain central to National Forest management, which should be conducted in co-stewardship with Tribal nations.

Here, LandWatch reiterates some of the key requests by the NWFP Federal Advisory Committee ([ldquo]FAC[rdquo]) and the Northwest Forest Plan Just Futures Collaborative to ensure Tribal sovereignty. We recognize that these groups represent a subset of Tribal views, and we defer locally to the goals, approaches, ideas, and understandings of the Tribes whose lands are now considered part of the Deschutes National Forest.

i. Tribal Consultation is Required

Irrespective of the selected Amendment alternative or final Record of Decision, the Forest Service is legally obligated to consult early and often with Tribal governments to ensure that Indigenous people[rsquo]s interests and knowledge are brought forward in the planning process and that land use allocations do not conflict with landscapes of cultural significance or Tribal treaty rights. Given this, the No Action Alternative (Alternative A) is not a legitimate option, since it would continue to represent a NWFP devoid of Tribal input and would not rectify the Forest Service[rsquo]s long-term exclusion of Tribes, rejection of Indigenous Knowledge, and dereliction of its trust responsibilities.

ii. Strengthen and Retain All Tribal Inclusion Plan Components

The alternatives in the DEIS arbitrarily partition Tribal inclusion plan components and force a manufactured decision between upholding Tribal sovereignty and advocating for approaches that prioritize ecological landscape function over commercial logging. Given the primary of Tribal inclusion, Indigenous knowledge, co-stewardship, and trust responsibilities in this Amendment, the Tribal inclusion plan components warrant

consideration and adoption irrespective of the timber and restoration targets set in the updated NWFP.

We urge the Forest Service to retain all Tribal inclusion plan components present in Alternative B. Similarly, we urge the Forest Service to adopt Tribal inclusion measures only present in Alternative D[mdash] which particularly focus on first foods[mdash]into the Record of Decision. The Forest Service should also change all Forest Stewardship Potential Management Approaches (TRIBAL-FORSTW-ALL-PMA) to be standards so that they become enforceable, meaningful sideboards for Tribal inclusion.

iii. Address the Impacts of Tribal Exclusion

The DEIS does not fully confront the causes or consequences of Tribal exclusion[mdash]and by extension, fire exclusion[mdash]within the NWFP area. Echoing a request by the NWFP Just Futures Collaborative, we ask that the final Record of Decision better account for the role the Forest Service and the 1994 NWFP have played in perpetuating this exclusion by including the FAC[rsquo]s full Tribal Inclusion recommendations (NWFP Just Futures Collaborative at 2).

iv. Indigenous Knowledge Must be Central to the Amendment and Its Implementation

Although the DEIS presents alternatives that would substantially improve tribal inclusion and incorporation of Indigenous knowledge in the NWFP, its underpinning analyses include relatively little Indigenous science and knowledge. The alternatives also lack sideboards for ensuring that Indigenous knowledge will be a core part of any project-level assessment within the NWFP area. The FAC, which included members and representatives from a wide geographic range of Tribes in the NWFP area, offered extensive recommendations for objectives, standards, and guidelines that would better protect Indigenous sovereignty by consistently incorporating Indigenous knowledge in project planning and implementation. The proposed action (Alternative B) includes standards that protect Indigenous knowledge and require closer collaboration with Tribes (e.g., TRIBAL-COSTW-STD-01 and TRIBAL-IK-STD), but the final standards should go further to recognize Indigenous knowledge as a key basis for the development of any project.

For example, FAC recommendation 1-50, which is a Potential Management Approach for Tribal Forest Stewardship (see TRIBAL-FORSTW-ALL-PMA), should be an enforceable standard or guideline in the Final Decision: [ldquo]Management activities shall consider Indigenous and western scientific research and ethnographic research related to relevant Tribal cultural land-use activities and interests when analyzing project effects. Ensure that no adverse effects are caused to any Treaty and other Tribal Rights, sacred places, practices, or elements of the landscape identified as culturally important to relevant Tribes[rdquo] (FAC Recommendations at 15; DEIS at A1-8).

v. Remove Structural Barriers to Cultural Fire and Other Reserved Treaty Rights

While including cultural burning, prescribed fire, and managed wildfire to the DEIS alternatives represents an important shift in the NWFP[rsquo]s approach to wildfire and forest management, the DEIS does not account for the structural and bureaucratic barriers that currently limit cultural burning and Tribal-led prescribed

fire. Nor does the DEIS adequately include Tribal cultural objectives[mdash]rather than western silvicultural objectives[mdash]of forest stewardship. Rather than simply acknowledging beneficial fire, the Forest Service must analyze and disclose how it will ensure that beneficial fire use will be a meaningful part of implementing the amended NWFP. Similarly, the Forest Service must analyze and disclose spatial information indicating where

beneficial fire may be used within the NWFP area and must also adopt policies that further clarify how and when prescribed fire and cultural burning will be employed. These additional analyses will provide necessary sideboards to ensure that fire inclusion[mdash]a critical part of Tribal inclusion[mdash] will occur in practice.

b. Forest Stewardship

The alternatives presented in the DEIS all substantially decrease protections for mature and old-growth trees in all forest types, while also proposing silvicultural treatment approaches that would prove counter to forest resilience, habitat, and climate goals and may also inhibit Tribal sovereignty.

i. Standards and Guidelines in Dry Forest Types

1.

1.

1.

1. Decreased Protections for Mature and Old-Growth Trees

LandWatch is concerned by the proposal for reduced protections for mature and old-growth trees in both Late-Successional Reserves ([ldquo]LSR[rdquo]) and Matrix in all alternatives. In Alternatives B and C, this change would allow harvest of trees up to 150 years old in dry LSR and trees established after 1850 in dry matrix (DEIS at 3-25). In Alternative D, trees and stands established after 1850 could be harvested in both dry LSR and dry matrix. For trees in the matrix under Alternatives B and C, the arbitrary proposed age thresholds contain significant exceptions for undefined [ldquo]restoration[rdquo] and to [ldquo]reduce wildfire risks,[rdquo] while also substantially reducing protections for 936,000 acres within the NWFP area (DEIS at 3-29). Alternative D, meanwhile, guarantees that trees established after 1850 can never age into protection, which directly contradicts the NWFP[rsquo]s intent to conserve mature and old-growth forests and habitat. In dry forest LSR, this amounts to an estimated additional 1.23 million acres of potential treatment. Adding to the concern, these increased age thresholds would also apply to riparian forests in LSR (DEIS at 3-37). The DEIS does not offer any evidence or analysis to support these age threshold changes in any forest types, beyond vague assertions that the thresholds will help [ldquo]address the need[hellip]for mature and old-growth forest conservation, while balancing for other priorities[rdquo] (DEIS at 3-24).

The Forest Service has also precluded any meaningful public analysis of the impacts of these proposed changes, since the DEIS does not adequately define or quantify [ldquo]dry forest[rdquo] or [ldquo]moist forest,[rdquo] so it is not clear exactly how or where these revised standards and guidelines ([ldquo]S&Gs[rdquo]) would apply. It is important to note that forests east of the Cascades are dynamic and encompass a continuum of moist and dry forest types. For example, on the Deschutes National Forest, Sisters Ranger District, some of the best owl habitat is within the wet mixed conifer (referred to as [ldquo]PST[rdquo]) Plant Association Group (PAG). 25 These areas are

---

25 Green Ridge Landscape Restoration Project, Wildlife Report, EA, p. 38

---

not dry forests, but the lack of clarity around forest type definitions raises concerns that forest types like the PST PAG may be inappropriately managed.

The DEIS further prevents clear assessment by presenting a table summary of [ldquo]Current and proposed LSOG management thresholds for conservation by alternative[rdquo] (Table 3-2, DEIS at 3-25) that contains different information about age thresholds for harvest in various LUAs than the narrative descriptions of [ldquo]Effects on late-successional and old-growth in dry forests in LSR and MLSA[rdquo] (DEIS at 3-28 and 3-29) and [ldquo]Effects on late-successional and old-growth in dry forests in Matrix[rdquo] (DEIS at 3-30). Whereas Table 3-2 describes the age threshold for dry forest LSR and Matrix in Alternative C as being the same as Alternative A (80 year threshold), the narrative descriptions of Alternative C treatments in dry forest Matrix and LSR describe the threshold as 150 years, or identical to Alternative B. This type of confusing discrepancy renders it impossible to understand the intended goals or likely outcomes of the various Amendment alternatives.

Beyond the confusion and uncertainty introduced by the proposed decrease in protections for mature and old-growth forests, each of the alternatives would pose substantial threats to wildlife that depend on mature and old-growth habitat, as well as on the broader ecosystem integrity of forests east of the Cascades, which already have a deficit of large, old trees (Buotte et al., 2020; Mildrexler et al., 2020). The Forest Service has failed to disclose and consider the cascading impacts to threatened, endangered, and sensitive species that would result from its proposed actions in all dry forest LUAs. Relatedly, there is a significant contradiction between the Forest Service saying, on the one hand, that the Amendment will not cause [ldquo]substantial adverse impacts[rdquo] to any species (DEIS at 1-7), while allowing considerably more logging of mature and old-growth forests, and by extension eliminating suitable ecological conditions for multiple listed species and species of conservation concern.

1.
1.
1.
1. Standards to Protect Large, Mature, and Old-Growth Trees and Forest Types

Instead of allowing increased logging of mature and old-growth forests and trees, the Amendment should include a standard that meaningfully protects all large, mature, and old-growth trees across the entire NWFP area, including in areas the Forest Service has determined to be at risk of large-scale disturbance. This type of standard would require managing NWFP area forests, and particularly dry forests, to maximize the recruitment and retention of mature and old-growth trees and stands. Such a standard is critical for forests and surrounding communities to receive the full benefits of healthy mature and old-growth forests.26

The best available science is clear that protecting mature and old growth forest conditions is essential to mitigating the impacts of climate change (Hudiburg et al., 2009; Law et al., 2018, 2022; Mildrexler et al., 2020), providing clean and cool water for fish, wildlife, and growing communities, and providing refuge for wildlife and people alike (Brandt et al., 2014). In fact, two of the architects of the original NWFP have called for an end to all

logging of mature and old growth trees within the NWFP planning area.27 As the

---

26 36 C.F.R. [sect] 219.13(b)(6); 36 C.F.R. [sect] 219.9(b)

27Guest Column: Protect older natural forests in the western Cascades (2021). The Register-Guard. Accessed February 14, 2025.

Federal Register Notice ([ldquo]FRN[rdquo]) for the NWFP Amendment states, [ldquo][p]rotecting and enhancing biodiversity of mature and old growth ecosystems is a central tenet of the NWFP, and the 2012 Planning Rule[rsquo]s focus on ecosystem integrity emphasizes this priority. Mature and old growth ecosystems are critical components of biodiversity and provide carbon storage[rdquo] (88 FR 87396). In considering management east of the Cascades, this central tenet must lead the development of all management actions, and the retention of all large trees should be part of all projects, which none of the DEIS alternatives guarantee.

Protecting mature and old growth trees on forests east of the Cascades does not prevent the Forest Service from implementing projects to address fuel concerns in forests where frequent fire was historically common. Large trees are not driving concerns related to fuel loading or the risk of large-scale disturbance. Removing small trees, including via methods such as thinning from below, can achieve fuels management objectives without logging large trees.

1.
1.
1.
1. Removal of Risk Reduction Guideline in LSR

The shift from a guideline based on reducing risk of major disturbances in LSR east of the Cascades to a set of geographically undefined age thresholds is especially antithetical to the original intent of the NWFP. The 1994 NWFP defines LSR as forests containing mature and old-growth age classes of trees, and describes creating LSR with [ldquo]an objective to protect and enhance conditions of late-successional and old- growth forest ecosystems, which serve as habitat for late-successional and old-growth forest related species including the northern spotted owl.[rdquo]28 LSR, as such, is intended to mature into our future old-growth forests and treatments are only allowed in very specific, very limited circumstances. This is further emphasized by another 1994 NWFP LSR description: [ldquo]these reserves represent a network of existing old-growth forests that are retained in their natural condition with natural processes, such as fire, allowed to function to the extent possible[rdquo] (NWFP at B-4). Further, the Forest Service concedes [ldquo][LSR] forest communities are the result of a unique interaction of disturbance, regeneration, succession, and climate that can never be recreated in their entirety through management. The structure, species composition, and function of these forests are, in their entirety, not fully understood[rdquo] (NWFP at B-5; emphasis added).

As such, the 1994 NWFP set guidelines that focused on young and plantation stand management to reduce the risk of catastrophic fire, with narrow exceptions for treatments in older LSR:

While risk-reduction efforts should generally be focused on young stands, activities in older stands may be appropriate if: (1) the proposed management activities will clearly result in greater assurance of long-term maintenance of habitat, (2) the activities are clearly needed to reduce risks, and (3) the activities will not prevent the Late-Successional Reserves from playing an effective role in the objectives for which they were established. (NWFP at C-13)

---

28 NWFP- Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl- Attachment A to the ROD for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3843203.pdf, p A-1, B-1

Although this guideline may have ultimately placed too much emphasis on fire suppression, it also supported a management direction more focused on disturbance regimes and successional processes that could have been further enhanced in this DEIS through Tribal inclusion and beneficial fire use. Instead, the DEIS seemingly abandons the understanding of LSR as communities that cannot result purely from silvicultural prescriptions. Simultaneously, it fails to correct the 1994 NWFP[rsquo]s omission that Indigenous cultural burning was central to the development of the late-seral, mature, and old-growth conditions that provide for habitat, ecological function, and cultural needs.

Further, removing the three exception factors outlined in the 1994 guideline for risk-reduction treatments in older LSR threatens to undermine the purpose of the NWFP and its ability to protect the ecological integrity of east side forests. The three factors are important sideboards for guiding informed project development, and the DEIS fails to demonstrate how the removal of mature trees (up to 150 years in dry LSR) will reduce risks and support long-term habitat maintenance for NSO and other species. Logging large trees conflicts with the purpose of the original NWFP, exacerbates large tree structure scarcity problems, and provides little if any benefit to reducing the risk of large-scale disturbance events.

ii. End All Salvage Logging

The science has long been clear that there is no ecological reason to conduct salvage logging operations (Brown et al., 2004; Noss et al., 2006). The Forest Service should end salvage logging in all LUAs, including on both dry and moist forest types east of the Cascades. In not including a DEIS alternative without salvage logging, the Forest Service failed to consider reasonable Amendment alternatives.

Research has found that the detrimental effects of salvage logging can include increased fine fuels, decreased

tree regeneration (Donato et al., 2006), soil compaction (Jennings et al., 2012), impaired water quality (Emelko et al., 2011), increased fuel loading (Donato et al., 2013), and altered bird nesting (Hutto & Gallo, 2006; Kronland & Restani, 2012), among other impacts. Salvage logging also has negative climate consequences: standing dead trees that remain post-fire continue to store substantial carbon (Harmon et al., 2011; Powers et al., 2013). The USFS literature review by Nemens et al. (2019) that the DEIS relies on to substantiate its commitment to salvage harvest specifically highlights each of these impacts. Yet, the DEIS insists there remains an open [ldquo]public and scientific debate on the economic and accelerated forest development benefits of postfire harvest of fire-killed trees,[rdquo] despite not seriously analyzing any benefits beyond timber outputs (DEIS at 3-32). If any debate exists, it is around the tradeoffs between selling post- fire logged trees and ecologically degrading burned areas. The Forest Service uses this idea of a [ldquo]debate[rdquo] to justify including salvage logging in all alternatives, with no quantified analysis of the specific impacts to the NWFP area, nor any consideration of a no-salvage alternative.

Alternative C places the greatest restrictions on salvage logging, prohibiting its use in moist LSRs and limiting dry forest salvage for [ldquo]protection of critical infrastructure, and along existing system roads[rdquo] (FORSTW-ALL-DRY-STD-03-C; see DEIS at 2-20). We contend that this type of [ldquo]salvage[rdquo] would be better classified as hazard tree felling, and that this standard should be strengthened to only allow hazard tree felling within a specified narrow distance of roads or other infrastructure, which would retain significant habitat benefits while removing hazards to humans and infrastructure.

iii. Setting Unsubstantiated Treatment Targets is Arbitrary and Capricious

Under the proposed action, the DEIS sets a target of logging one third of all dry forests in the NWFP area within 15 years of Amendment approval[mdash]790,000 to 964,000 acres every 15 years, not including acres of salvage logging (DEIS at 3-33). From an ecological, cultural, and climatic perspective, this is a completely arbitrary target that will also fail to meet fire resilience objectives. The DEIS lacks a rationale for why logging as much as four times more per decade than the current NWFP would achieve any of the DEIS[rsquo]s intended outcomes beyond potentially[mdash]though by no means certainly, given the depressed state of eastside timber markets[mdash]increasing decadal MMBF sales.

For all [ldquo]dry forest[rdquo] LUAs, the Forest Service proposes to conduct all logging projects and achieve timber production objectives using [ldquo]ecological forestry methods,[rdquo] which the DEIS defines in Appendix F:

Ecological forestry utilizes ecological models from natural forest systems as a basis for managing forests. It incorporates principles of natural forest development, including the role of natural disturbances, in the initiation, development, and maintenance of forests and forest landscape mosaics. Most importantly, ecological forestry recognizes that forests are ecosystems with diverse biota, complex structure, and multipole functions, and not simply collections of trees valuable primarily for the production of wood. In doing so it seeks to maintain the fundamental capacities (integrity) of the forest ecosystems to which it is applied (DEIS at F-2, citing Franklin et al., 2018).29

The stated structural complexity and biodiversity outcomes of [ldquo]ecological forestry methods[rdquo] are promising in a vacuum, but this definition offers no clarity as to how, where, or over what time scales the Forest Service might employ these methods. The vague concept of ecological forestry is especially concerning

considering the arbitrary logging treatment acreage targets set by the DEIS. To truly achieve ecological outcomes and support natural disturbances as described the above definition, the Forest Service should lead with ecological forestry methods, which in turn should dictate the number of acres requiring treatment. As it stands, the DEIS has the order of operations reversed by starting with decadal treatment acreage targets, which will inevitably result in conflicts between timber production and the conditions dictated by ecological forestry modeling outputs. Without clearer methodology sideboards, this conflict will likely prioritize timber over any commitment to forest ecosystem diversity or structural complexity.

c. Fire Resistance and Resilience

Fire is a key ecological driver in Central Oregon forests, having shaped forest structure, process, pattern, and composition for millennia. There is little controversy over whether a lack of fire in forest communities that historically experienced frequent, low to mixed severity fires[mdash]such as lower elevation ponderosa pine

---

29 This reference lacks a bibliographic entry in the DEIS, which makes it difficult to determine what, precisely, the Forest Service intends to cite. Presumably, the reference is to the 2018 textbook [ldquo]Ecological Forest Management[rdquo] by Jerry F. Franklin, K. Norman Johnson, and Debora L. Johnson.

---

and dry-mixed coniferous forests[mdash]has fundamentally transformed and contributed to the degradation of many of these forest ecosystems (Brown et al., 2004; Haugo et al., 2015; Noss et al., 2006). While public perception is often that too much of our forests are burning in the modern era, western forests continue to be in a fire deficit (Hessburg et al., 2021; Parks et al., 2015) and modern fire suppression efforts effectively put out 97-98 percent of all fire starts (Dombeck et al., 2004; Hessburg et al., 2021; North et al., 2015). The two percent of fires that escape suppression efforts are most often driven by extreme fire weather and account for 97 percent of all firefighting costs and area burned (Calkin et al., 2005; Hessburg et al., 2021).

The past century and a half of fire exclusion and suppression is also a direct result of Tribal exclusion from public lands. Indigenous peoples in the Pacific Northwest have practiced cultural burning since time immemorial, including east of the Cascades in what is now the NWFP area (Kimmerer & Lake, 2001; Steen-Adams et al., 2019). These practices were eliminated and criminalized as settler colonists began occupying the West and the Federal government dispossessed Tribes of land and culture (Long et al., 2021).

Changes in fire frequency and extent are just one of a suite of factors that have profoundly influenced forest ecosystems east of the Cascades. The transformation and degradation of lower elevation pine dominated forests and watersheds has primarily been driven by logging of large fire-resistant trees,30 extensive road building, fire exclusion, and livestock grazing (Brown et al., 2004; Stine et al., 2014). The combination of these [ldquo]drivers of degradation[rdquo] have culminated in dramatic impacts to forest ecosystems, playing a leading role in the biodiversity crisis and the loss or near loss of multiple keystone species. Though the challenges related to addressing these drivers of degradation are large, each is fundamentally a resource management decision that can be changed, mitigated, or prohibited all together through this amendment

i. Fire inclusion is a necessary cultural and ecological practice

Mature and old-growth forests and trees have historically been an outcome[mdash]though not necessarily a direct objective[mdash]of Indigenous fire use, which helped maintain overall forest structure and biodiversity and eliminated smaller fine fuels on many forested landscapes (Long et al., 2021). By extension, the NWFP Amendment must include Indigenous cultural and prescribed burning as a critical management approach for supporting holistic forest function, particularly in fire-dependent forests east of the Cascade Crest. Cultural burning may support forest biodiversity and specialized habitat needs at a finer scale than is possible merely through frequent, low-severity wildfire (Long et al., 2021). Cultural burning[mdash]in combination with wildfire regimes[mdash]also supports the availability of First Foods, browse and forage for game species, and basketry materials (Anderson & Lake, 2016; Marks-Block et al., 2019, 2021; Steen- Adams et al., 2019).

The FEIS must retain cultural burning and other Indigenous stewardship elements to ensure that Indigenous fire practices are recognized as both vital and distinct from Western prescribed burning. Fuels reduction must not be the sole purpose of beneficial fire use in the Amendment. Protecting and prioritizing Indigenous

---

30 Despite the ecological impacts, large tree logging continues to occur on the Deschutes National Forest: Groupsounds alarm over plan to cut big, old trees near Bend - OPB (2022).

---

fire practices will help restore not only an ecological fire regime, but also a cultural fire regime across the NWFP area.

ii. Standards and Guidelines for Community and Infrastructure Protection

Despite the ostensible goal of enhancing community wildfire protection, the DEIS fails to take a hard look at the robust science around home hardening, defensible space, and human ignition prevention as the most effective ways to protect built infrastructure and people from wildfire damage (Cohen, 2000; Syphard et al., 2014). Rather, the Forest Service continues to rely on a wildfire management approach that [ldquo]inverts[rdquo] the wildfire problem by basing prevention strategies on the misguided idea that forests encroach on communities, rather than recognizing the reality that communities encroach on forests (Calkin et al., 2023).

Insofar as the DEIS devotes attention to community protection, the Guidelines for Fire Resilience under the proposed action specifically give primacy to fuels treatments (i.e., vegetation removal) over the goals of other important ecological S&Gs. Guideline FIRE-ALL-GDL-03, for example, deprioritizes riparian reserve S&Gs in service of near-community vegetation removal: [ldquo]In community protection areas, fuels treatments should take precedence over riparian reserve standards and guidelines when necessary to meet fire behavior objectives consistent with sustaining long-term aquatic ecosystem function (see DC-01; 1994 NWFP Standards and Guidelines page C-35, FM-01)[rdquo] (DEIS at A1-26). Similarly, FIRE-ALL-GDL-04 supersedes all other S&Gs across all other LUAs in service of vegetation removal: [ldquo]In community protection areas, fuels treatments should take precedence over other standards and guidelines across the LUAs when necessary to meet fire behavior objectives while meeting the long-term purposes of these LUAs (see DC-01)[rdquo] (DEIS at A1-26). Meanwhile, [ldquo]community protection area[rdquo] is loosely defined as [ldquo]locations where wildfire risks affect communities, tribal values, and infrastructure. There is significant risk of potential economic loss and public safety concerns posed by a wildfire occurring within this area[rdquo] (DEIS at F-1). In other words, the Forest Service could determine that a community protection area exists almost anywhere, and

accordingly remove vegetation deemed to be [ldquo]hazardous fuels[rdquo] at the expense of other important forest values.

Community protection is clearly an important and worthwhile aim of the Amendment, but these [ldquo]community protection[rdquo] S&Gs continue to rely on mechanical fuels reduction in wildlands as the primary solution to what is fundamentally a built infrastructure problem (Calkin et al., 2023). While fuels removal will undoubtedly play a role in enabling fire suppression tactics in and near communities, the Forest Service must do more to realistically face this problem by developing S&Gs that elevate the importance of home hardening and defensible space, and that use specific definitions of community risk that incorporate social vulnerability and adaptive capacity in addition to proximity to forests (Lacey et al., 2025).

iii. Standards and Guidelines for Prescribed and Cultural Burning

In amending the NWFP, new S&Gs should require understory burning to be the primary focus of projects proposing to remove small trees. Whether it is the only treatment, or implemented shortly after science- based thinning, carefully applied understory burning provides important ecological benefits, creating

landscape heterogeneity, reducing surface and ladder fuels, lowering stand densities, improving drought resistance of surviving trees, and may be the most appropriate treatment in riparian areas that historically experienced frequent fire (Brown et al., 2004; Kauffman et al., 1997; Knapp & Keeley, 2006; Mildrexler et al., 2023; van Mantgem et al., 2016). These S&Gs should support the use of both prescribed burning and cultural burning as forms of beneficial fire.

iv. Standards and Guidelines for Suppression Activities

Neither the existing NWFP nor the proposed Amendment alternatives include S&Gs for management during fire suppression. Given the DEIS[rsquo]s focus on refining and updating management guidance to address wildfire concerns[mdash]especially east of the Cascades[mdash]the Amendment should provide additional clarity around what actions are allowed during suppression activities, particularly in mature and old-growth forests.

For example, additional clarity is needed around how, when, and whether the Forest Service builds fuel breaks as part of suppression activities. The Forest Service should consider S&Gs that clearly define when and where fuel breaks are appropriate. Where fuel breaks are deemed necessary to suppression efforts, new S&Gs that provide clarity around how they are implemented will greatly reduce negative outcomes. For example, S&Gs around the development of gappy, patchy, clumpy fuel breaks and shaded fuel breaks where all large trees are retained would mitigate the potential ecological impacts of suppression activities.

The Forest Service should also develop S&Gs that account for emerging research indicating that wildfire management decisions[mdash]including using managed wildfire for resource benefit[mdash]are likely to result in better ecological outcomes and reduced high-severity fire when compared to mechanical management approaches (Furniss et al., 2024). Relatedly, the Forest Service should consider and adopt an alternative that includes S&Gs to more cautiously employ suppression tactics, given the evidence that intensive suppression leads to an increased proportion of high-severity, uncontrollable, and dangerous wildfires on forest

landscapes, a phenomenon termed [ldquo]suppression bias[rdquo] (Kreider et al., 2024). Concerningly, the DEIS ties itself explicitly to the Wildfire Crisis Strategy, which implies continued primacy of fuels removal and fire suppression that will further entrench suppression bias without thoughtful S&Gs in place.

S&Gs for suppression activities will assist the Forest Service in fully meeting the original purpose of the NWFP, including conserving and mitigating impacts to mature and old-growth ecosystems, NSO and other species habitats, and riparian areas.

d. Biological Resources [ndash] Ecological Integrity and Habitat Protection

i. Standards and Guidelines to Protect the Ecological Integrity of Forests

The Forest Service should establish new forest plan S&Gs that protect the ecological integrity of the forest, including key wildlife habitat, under all management scenarios.31 For example, the Forest Service should

---

31 36 C.F.R. [sect] 219.9(a)(1)

---

develop and adopt a standard that protects all large ([ge]20 inches DBH), mature, and old growth trees. Large trees, regardless of species and age, provide critical wildlife habitat (both alive and dead), store the majority of forest carbon, are in a deficit east of the Cascades, and are generally the most fire-resistant trees on the landscape. Logging large trees as part of risk reduction efforts conflicts with the purpose of the original NWFP, exacerbates large tree structure scarcity problems, and provides little if any benefit to reducing the risk of large-scale disturbance events. Further, protecting large trees will reduce the controversy and contentious tradeoffs that surround large tree logging, thus streamlining silviculture prescriptions for LSR stands and improving the public[rsquo]s trust in the Forest Service.

Protecting large trees, landscape heterogeneity, and broader ecosystem integrity will require S&Gs that support the total ecological and cultural function of a landscape, rather than simply its silvicultural composition. While certain place-specific assessments and management approaches are appropriately left to the project level, landscape-scale analysis is still critical to guiding decisions at the National Forest or Ranger District level.

ii. Failure to Assess Aquatic and Riparian Impacts

LandWatch supports leaving the Aquatic Conservation Strategy ([ldquo]ACS[rdquo]) intact as part of this Amendment process, and the Forest Service should ensure the ACS remains unchanged in the FEIS. However, a lack of change to the ACS direction and approach does not mean that the DEIS alternatives will not have impacts on aquatic and riparian ecosystems. The DEIS improperly dismisses impacts to aquatic and riparian resources from consideration under the premise that [ldquo]impacts to water resources would not be expected to change under the Proposed Action and action alternatives because the proposed amendment does not modify the framework of the ACS[rdquo] (DEIS at 1-12). This is flawed, unsubstantiated, and circular reasoning; effectively, the Forest Service claims that because the ACS Standards and Guidelines will remain in place, there

cannot be meaningful effects on aquatic and riparian areas. Yet, the proposed action will explicitly increase logging in riparian reserves ([ldquo]RRs[rdquo]), and the proposed one million additional annual acres of logging activity will require road construction and maintenance likely to contribute to increased erosion, sedimentation, and other riparian impacts. Furthermore, the DEIS explicitly admits the possibility of impacts to aquatic species in its inclusion of 11 federally listed fish species [ldquo]potentially affected by the Proposed Amendment Action or Action Alternatives,[rdquo] including multiple culturally important anadromous fish and sucker species (DEIS at 3-54 to 3-55). In relying on faulty logic and neglecting to disclose and consider the impacts of heavier logging in RRs, the Forest Service has failed to take a hard look at the reasonably foreseeable effects of the proposed actions on aquatic and riparian habitats and resources.

Although the DEIS fails to analyze potential impacts to listed fish and other aquatic species, the likely effects of management approaches such as removing large, old trees in RRs are distinct and well- understood. Large trees are integral to a variety of crucial aquatic and riparian ecosystem functions and processes[mdash]both as standing trees and downed wood (large woody debris)[mdash]such as helping to store sediments and nutrients, shaping channel morphology and instream habitats, supporting groundwater flows, and shading streams (Beschta et al., 1987; Bilby & Ward, 1991; Frissell et al., 2014; Pollock & Beechie, 2014). Removal of large riparian trees under the Amendment will trigger foreseeable adverse effects[mdash]both direct and indirect[mdash]to threatened and endangered aquatic species and their habitat, including (but not limited to): Deficits of large woody debris and pool frequency; increases in stream temperature, peak flows, and sediment delivery; decreases in base flows; and reductions in habitat complexity. See the attached expert reports from fisheries biologist Amy Stuart and hydrologist Jonathan Rhodes for additional documentation of the importance of protecting aquatic and riparian systems in forests east of the Cascades.

The Forest Service must disclose and consider riparian and aquatic impacts of the proposed action and alternatives and must adopt an alternative that prevents further degradation of ESA-listed species habitats.

iii. Northern Spotted Owl Dispersal, Nesting, Roosting, and Foraging Habitat

Protecting NSO dispersal habitat is an essential management consideration east of the Cascades, especially as climate change and drought place additional stressors on wildlife species, shifting habitats and forcing species to adapt to survive (Buchanan, 2004). As of 2025, the plight of the NSO is urgent: forest losses and barred owl invasions have caused NSO populations to continue declining, prompting the US Fish and Wildlife Service ([ldquo]USFWS[rdquo]) to recommend that NSO ESA listing status be changed from [ldquo]threatened[rdquo] to [ldquo]endangered[rdquo] (Davis et al., 2022).

NSO dispersal habitat is essential in supporting the transience and colonization phases of dispersal, which includes nesting, roosting, and foraging habitat ([ldquo]NRF[rdquo]). As research has found, [ldquo]juveniles strongly select for old forest with closed canopy (>70 percent canopy cover) and large-diameter trees (>20 inch DBH), which are similar forest conditions selected by adult spotted owls for nesting and roosting[rdquo] (Lesmeister et al., 2018). The same study found that canopy cover of 40% or less is [ldquo]unlikely to be sufficient to facilitate juvenile movements on the landscape[hellip]Stands managed for dispersing spotted owls should be at least 80 percent canopy cover and have large average tree diameter[rdquo] (Lesmeister et al., 2018). USFWS data collected to complete the 2011 NSO recovery plan further supports these statements, finding that [ldquo]availability of suitable forest cover was critical for territory acquisition and sustained occupancy by spotted owls,[rdquo] and essential to NSO dispersal and survival (Lesmeister et al., 2018).

Logging one third of all dry forests in the NWFP area within 15 years of Amendment approval would have significant impacts on NSO habitats and raise concerns for dispersing wildlife in the face of climate change. While the acreage targets are framed as measures to improve forest resistance and resilience to fire, and to retain old trees, those outcomes are uncertain, whereas the scale of proposed treatments will directly impact the resilience of NSO by substantially changing habitat conditions.

Despite likely devastating NSO habitat, the proposed large-scale logging in the DEIS is also unlikely to prevent or mitigate fire severity and impacts during the period where fuels on the landscape remain reduced. Research by Baker and Rhodes (2008) demonstrated that the probability of high severity and high-moderate severity fires affecting treated areas in their window of effectiveness was very low, concluding that in [ldquo]92- 98% of treated areas, fuel treatment impacts on watershed processes are not likely to be counterbalanced by a reduction in higher-severity fire[rdquo] (Baker & Rhodes, 2008). A 28-year study on NSO dispersal also found that while nesting habitat has been lost due to wildfire, very little loss of forest due to wildfire has actually occurred in the dispersal areas studied (Jenkins et al., 2019).

Dispersal habitat on federal lands has seen a 1% increase since the NWFP was adopted (DEIS at 3-74), but the Forest Service fails to take a hard look at how fuels treatments in dry forests would impact dispersal habitat. The DEIS cites no studies or monitoring reports from projects east of the Cascades[mdash]where fuels treatments have specifically been implemented to address the perceived threat of fire[mdash]that could provide insights into the implications of the proposed actions on dispersal habitat and, by extension, the ability of species to move and adapt to changing climatic conditions. The DEIS also fails to consider that NSO may be using dry forests more frequently than previously understood, largely due to the threat of barred owls, which are less likely to use dry forests. The level of uncertainty and lack of supporting information on NSO habitat in the DEIS fails to support an informed process, and the Forest Service must account for the best available science on trends in NSO dispersal in the FEIS.

The DEIS states that the Amendment process is [ldquo]driven by evolving ecological understanding and the need for the Forest Service to adapt their management strategies to current and future challenges[rdquo] (DEIS at ES-2). To meet future challenges, including changing habitat conditions, wildlife must be able to move and disperse. Yet, the Forest Service fails to analyze any alternative that substantially increases dispersal habitat for NSO or other wildlife species.

iv. Failure to Analyze the Impact of Roads

The DEIS includes roads on the list of [ldquo]Other Resources Considered or Dismissed,[rdquo] despite acknowledging:

It is possible that the forest road networks could be affected by project/treatment-specific actions authorized by the proposed amendment. Potential effects to this resource may include the creation of new roads for logging, impacts to existing roads due to management activities, or construction or alteration of forest roads due to forest thinning or prescribed burns. (DEIS at 1-12)

The DEIS then dismisses this as an issue for consideration because [ldquo]the scope, extent, and location of these effects cannot be determined at this time, and a project/treatment specific evaluation would be required for impacts to individual roads or road networks[rdquo] (DEIS at 1-12).

The DEIS further goes on to say that:

[t]he proposed NWFP amendment does not authorize or make any project-level decisions; therefore, the extent and location of project-specific ground-based disturbances (e.g., restoration treatments, prescribed burning, cultural burning, timber harvest, and road construction/reconstruction activities) are not known, nor is it possible to obtain this information at this time. (DEIS at 1-14)

Despite this explanation about why such information cannot be obtained, the DEIS repeatedly discusses restoration treatments, prescribed burning, cultural burning, and timber harvest within the scope of its proposed activities and Alternatives[mdash]all of which it acknowledges would require road construction[mdash]but roads themselves remain absent from the analysis.

Extending the logic of excluding roads from the DEIS analysis, any projected timber targets or analyses of resource impacts in the NWFP planning area should have been dropped from consideration due to inability to determine [ldquo]scope, extent, and location.[rdquo] If treatment acreage targets can be set in the NWFP amendment, there should be some ability to estimate additional road needs, associated potential habitat impacts, and long-term roadway restoration and decommissioning processes.

Road construction and maintenance are connected actions and must be analyzed in the EIS. As discussed previously in this comment, the Forest Service has failed to adequately address connected actions. Here, in order for the Forest Service to proceed with projects to meet the proposed dry forest logging targets outlined under the preferred alternative[mdash]logging 790,000 to 964,000 acres every 15 years, not including acres of salvage logging[mdash]the Forest Service will first need to conduct road maintenance and construction activities to facilitate logging access. Since increased logging targets and increased road construction and maintenance are necessarily connected, the Forest Service must analyze and disclose the extent, density, and impacts of anticipated road construction under the various alternatives. In particular, the new age thresholds and treatment acreage targets indicate substantially more roads would be necessary in LSR[mdash]a reasonably foreseeable effect which the Forest Service fails to address.

The biological impacts of roads are well documented. For example, additional sediment loads in streams over extended periods of time from timber harvest and roads have been known for decades. Bjornn and Reiser (1991) summarized that:

Sedimentation affects fish habitat quality by increasing fines which embed gravels and substrates. Embedded gravels reduce spawning habitat by making gravel difficult to lift, reduces dissolved oxygen to incubating eggs,

and covers rearing fish. Turbidity affects fish production by reducing production of aquatic insects and plankton, and foraging efficiency of fish. Sediment fills interstitial spaces between rocks in the substrate, reduces habitable area in streams, and when it exceeds 20 percent of the total area on the substrate, can smother fish and frog eggs and increase mortality.

May and Lee (2004) found that [ldquo]increases in coarse sediment supply can be associated with sharp reductions in salmonid habitat and productivity[rdquo] and reported that streams with discontinuous flow caused by sediment increases reduced survival by crowding fish into smaller areas with reduced food availability. The additional bedload of both fine sediments and coarser sediment delivered to streams fills in the channel, decreasing pool depth, channel complexity, and changing the channel profile to a shallow, wide profile.

Recent research by Kampf et al. (2021) on intermittent and ephemeral streams indicates that these nonperennial streams drain almost 60% of forested lands and are the primary connectors with aquatic systems. The authors stated that [ldquo]land uses that modify flow regimes in these streams can affect sediment and organic matter transport and distribution, stream temperature dynamics, and biogeochemical processing[rdquo] (Kampf et al., 2021). Even selective logging increases fine sediments along with increased water temperatures and these changes in habitat quality are found decades after logging activities have ceased (Guenther et al., 2014; Kreutzweiser et al., 2005; Miserendino & Masi, 2010).

Upland impacts of roads are well known, too. For example, negative effects of motor vehicle use and roads on wildlife include wildlife mortality, decreased reproductive success, direct and indirect loss of habitat, displacement, and reduced habitat connectivity. These negative impacts are the result of a series of factors, including access for predators and people, fragmentation of habitat patches, behavioral changes in response to human use, increased noise, and physical alteration of habitat. Further, motorized use of roads and routes substantially increases movement rates of wildlife, causing a series of cascading effects including higher stress levels, increased energetic costs, and reduced productivity.

The Forest Service must analyze the impacts of road construction activities as part of the same NEPA, including establishing an accurate baseline of the existing road network within the NWFP area.

v. Exemptions from Survey and Manage Requirements in Alternative D

Eliminating Survey and Manage requirements for [ldquo]hazardous fuel reduction treatments[rdquo] within 0.25 miles of communities, as proposed in Alternative D, is arbitrary and antithetical to the purposes of the NWFP (DEIS at 3-81 to 3-82). The DEIS fails to clarify what constitutes a [ldquo]community[rdquo] for purposes of hazardous fuels reduction treatments and does not justify the selection of a 0.25-mile buffer. The only reasoning for this set of exemptions seems to be fast-tracking fuels removal, but with no justification as to why this would require an exemption from Survey and Manage requirements, nor how such an exemption would improve community wildfire safety. Under no circumstances should the Forest Service adopt an alternative that would decrease species protection, particularly with no evidence that this approach would increase community safety.

e. Climate Change and Carbon Storage

A need to incorporate considerations around climate change, ecological integrity, and carbon purportedly drove this Amendment process. However, the DEIS neither meaningfully analyzes how the proposed action would impact climate adaptation and carbon storage, nor how the proposed Amendment alternatives would interact with current and anticipated social, ecological, cultural, and economic impacts of climate change. NEPA calls on agencies to [ldquo]fulfill the responsibilities of each generation as trustee of the environment for succeeding generations,[rdquo]32 and the Forest Service has blatantly failed to do so in this DEIS.

i. Climate Adaptation

It is incumbent upon the Forest Service to disclose and consider the climate implications of its management decisions within the Amendment, yet the DEIS contains almost no information on climate change adaptation in NWFP forests. To support an informed process, the DEIS should have incorporated the best available, regionally relevant research, such as the biannually-updated Oregon Climate Assessments33 and

---

32 42 U.S.C. [sect] 4331(b)(1)

33 Oregon Climate Change Research Institute released the 7th Oregon Climate Assessment on January 8, 2025.

---

equivalents from Washington and California as baseline data on climate impacts and adaptation.

Climate change projections[mdash]and their implications for adaptation and adaptive management[mdash]should be central to any adopted alternative. Only Alternative D explicitly calls for analysis of projected climate impacts on vegetation, but this type of consideration should be present in any adopted alternative in conjunction with the best available science on ecological forest stewardship (DEIS at 2-12). Further, to ensure Tribal inclusion and co-stewardship, the Forest Service must incorporate components from Tribal climate adaptation plans into its FEIS.34

ii. Carbon Storage

To the extent that carbon stocks matter to the NWFP Amendment per se in the context of climate change, it is as a form of mitigation, with National Forests providing substantial aboveground and belowground carbon sinks. Instead of emphasizing the important role of forest carbon[mdash]particularly in mature and old- growth forests[mdash]as a climate mitigation strategy, the DEIS offers a faulty and cherry-picked analysis of carbon stocks and storage that over-emphasizes the role of wildfire in forest carbon emissions and uses the concept of [ldquo]carbon stability[rdquo] in confusing and irrelevant ways (see DEIS at 3-86 to 3-93).

The over-emphasis on wildfire-induced carbon emissions also omits any comparative analysis between fire-based emissions and carbon storage losses from logging large, old trees. This is a critical omission; since before the development of the 1994 NWFP, research has demonstrated that harvesting old-growth trees and converting forests to be younger and faster-growing will not result in decreased atmospheric CO2. Instead, post-logging forest carbon storage is greatly reduced and does not return to old-growth capacity for at least 200 years. This is true even when accounting for ongoing storage in timber products (Harmon et al., 1990). In eastside forests, retention of the largest, oldest trees is especially critical for carbon storage. East of the Cascades, only 3% of

remaining trees are considered large ([ge]21[rdquo] DBH), but these trees store 42% of aboveground forest carbon (Mildrexler et al., 2020). Larger, older trees in dry forests are also the most fire resistant and resilient.

Given the body of research on fire resilience and carbon storage in dry forests and forests east of the Cascades, it is particularly imperative to protect mature and old-growth trees in both dry forest matrix and LSR. The replacement of the risk-reduction guideline and the increase in harvest age thresholds are in direct conflict with the Amendment[rsquo]s stated goals of enhancing fire and climate resilience. Alternative proposals, such as creating reserves to protect forest carbon and reduce biodiversity loss, should have been considered alongside other carbon factors in the DEIS (Law et al., 2022). Without improved analysis and a more expansive view of forests[rsquo] roles in both climate adaptation and mitigation, the Amendment will fail to meaningfully incorporate climate change considerations.

---

34 The Tribal Climate Change Project maintains a Tribal Climate Change Guide that includes Tribal ClimateAdaptation Plans from across the United States, including the Northwest.

V. EFFECTIVENESS MONITORING

Effectiveness monitoring has been part of the NWFP since its inception, under the premise that [ldquo][i]nformation gained through monitoring, research, and other sources of information provide a basis for adaptive management and decision-making based on best available scientific information (DEIS at 2-25). This Amendment should therefore update monitoring systems to better reflect the best available science on climate change, fire, habitat connectivity, and old growth forests. Updating these monitoring systems must also incorporate Indigenous knowledge and perspectives to fully inform both ecological and cultural outcomes of management decisions. Fundamentally, quality monitoring is key to adaptive management, which should be central to forest management in the context of climate change.

The Forest Service should consider and adopt new forest plan standards that require effectiveness monitoring for a percentage of all treated stands within a watershed to better understand the outcomes of management. For example, the Forest Service should adopt a standard that requires 15-20% of all treated stands within a watershed to be monitored for the duration of the plan, which could in turn inform adaptive management strategies for future treatment approaches. In addition, effectiveness monitoring should be triggered when a fire occurs within a watershed. Effectiveness monitoring is paramount to assessing whether treatments are attaining project goals, especially as it relates to wildlife habitat and risk reduction. An effectiveness monitoring program must be carefully developed and include a defined framework, with clear process for establishing a monitoring plan, implementation, and inter-disciplinary team review.

As part of an effectiveness monitoring program, the Forest Service must consider and specify how it will sustain monitoring efforts through time, including how efforts will be staffed and funded. The Forest Service should also consider what role local groups can play in assisting in effectiveness monitoring efforts. Harnessing Indigenous

and local knowledge based on long-term observations and experiences, including community-based monitoring, can assist the Forest Service in achieving monitoring and adaptive management goals (Keenan, 2015). Tapping local knowledge can also improve agency relationships with the public and provide sustained institutional knowledge for an agency that sees high staff turnover at the forest level. This is especially important now, as the Forest Service is conducting mass firings and significantly impacting the ability of the agency to meet is Forest Plan obligations. The original NWFP was heavy on the promise of monitoring but often failed to deliver in practice. In amending the NWFP, the agency is obligated to recalibrate its monitoring goals and provide the necessary support to follow through.

VI. CONCLUSION

Amending the 1994 NWFP is necessary for the Forest Service to demonstrate its commitment to Tribal inclusion, ecologically sound wildfire management, and adaptive management practices in the context of a rapidly warming climate. We urge the Forest Service to use this opportunity to elevate non-timber interests to holistically manage the 17 NWFP National Forests for the benefit of present and future generations.

Further, Amending the NWFP provides the Forest Service an opportunity to improve public trust and transparency in how our National Forests are managed. The recent trend of transitioning from standards to

guidelines has caused significant concern and increased uncertainty around forest management outcomes, eroding public trust in the Forest Service as an institution. The DEIS largely continues this trend away from standards[mdash]and even, in several alternatives, from guidelines[mdash]toward ever-greater forest-level discretion. Maintaining and building upon standards, especially for wildlife and ecological integrity, is vital for ensuring transparency around intended project outcomes and management actions. Forest plan standards are a cornerstone to public trust with the Forest Service; further eroding standards will only lead to more conflict and increased public mistrust of the agency.

Thirty years after the NWFP[rsquo]s initial adoption, and in a time of great ecological and social uncertainty, it is time for the Forest Service to update its management approach in the Pacific Northwest to fulfill its responsibilities to the people and species of the region. We urge the Forest Service to adopt a NWFP Amendment that prioritizes Tribal inclusion, supports ecological integrity, protects habitat quality and connectivity, and integrates beneficial fire use at scale.

Thank you for considering these comments. Please retain Central Oregon LandWatch on your list of interested public for this project.

Sincerely,

[]

Wild Lands & Water Program Manager Central Oregon LandWatch

CC:

[] Executive Director

Central Oregon LandWatch ben@colw.org

[]

Wild Lands & Water Program Director Central Oregon LandWatch jeremy@colw.org

References

Anderson, M. K., & Lake, F. K. (2016). Beauty, Bounty, and Biodiversity: The Story of California Indian[rsquo]s Relationship with Edible Native Geophytes. Fremontia, 44(3), 44[ndash]51.

Baker, W. L., & Rhodes, J. J. (2008). Fire Probability, Fuel Treatment Effectiveness and Ecological Tradeoffs in Western U.S. Public Forests. The Open Forest Science Journal, 1(1), 1[ndash]7. https://doi.org/10.2174/1874398600801010001

Beschta, R. L., Bilby, R. E., Brown, G. W., Holtby, L. B., & Hofstra, T. D. (1987). Stream Temperature and Aquatic Habitat: Fisheries and Forestry Interactions. In E. O. Salo & T. W. Cundy (Eds.), Streamside Management: Forestry and Fishery Interactions (pp. 191[ndash]232).

Bilby, R. E., & Ward, J. W. (1991). Characteristics and Function of Large Woody Debris in Streams Draining Old-Growth, Clear-Cut, and Second-Growth Forests in Southwestern Washington. Canadian Journal of Fisheries and Aquatic Sciences, 48(12), 2499[ndash]2508. https://doi.org/10.1139/f91-291

Bjornn, T.C. and Reiser, D.W. (1991). Habitat requirements of salmonids in streams. In Meehan, W. (Ed) Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication, 19, 83-138.

Brandt, P., Abson, D. J., DellaSala, D. A., Feller, R., & von Wehrden, H. (2014). Multifunctionality and biodiversity: Ecosystem services in temperate rainforests of the Pacific Northwest, USA. Biological Conservation, 169, 362[ndash]371. https://doi.org/10.1016/j.biocon.2013.12.003

Brown, R. T., Agee, J. K., & Franklin, J. F. (2004). Forest Restoration and Fire: Principles in the Context of Place. Conservation Biology, 18(4), 903[ndash]912. https://doi.org/10.1111/j.1523- 1739.2004.521_1.x

Buchanan, J. B. (2004). In My Opinion: Managing habitat for dispersing northern spotted owls[mdash]Are the current management strategies adequate? Wildlife Society Bulletin, 32(4), 1333[ndash]1345.

Buotte, P. C., Law, B. E., Ripple, W. J., & Berner, L. T. (2020). Carbon sequestration and biodiversity co-benefits of preserving forests in the western United States. Ecological Applications, 30(2), e02039. https://doi.org/10.1002/eap.2039

Calkin, D. E., Barrett, K., Cohen, J. D., Finney, M. A., Pyne, S. J., & Quarles, S. L. (2023). Wildland- urban fire disasters aren[rsquo]t actually a wildfire problem. Proceedings of the National Academy of Sciences, 120(51), e2315797120. https://doi.org/10.1073/pnas.2315797120

Calkin, D. E., Gebert, K. M., Jones, J. G., & Neilson, R. P. (2005). Forest service large fire area burned and suppression expenditure trends, 1970-2002. Journal of Forestry. 103(4): 179-183. https://research.fs.usda.gov/treesearch/24526

Cohen, J. D. (2000). Preventing Disaster: Home Ignitability in the Wildland-Urban Interface. Journal of Forestry, 98(3), 15[ndash]21. https://doi.org/10.1093/jof/98.3.15

Davis, R. J., Lesmeister, D. B., Yang, Z., Hollen, B., Tuerler, B., Hobson, J., Guetterman, J., & Stratton,

A. (2022). Northwest Forest Plan[mdash]The First 25 Years (1994[ndash]2018): Status and Trends of Northern Spotted Owl Habitats (General Technical Report No. PNW-GTR-1003). U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Dombeck, M. P., Williams, J. E., & Wood, C. A. (2004). Wildfire Policy and Public Lands: Integrating Scientific Understanding with Social Concerns across Landscapes. Conservation Biology, 18(4), 883[ndash]889. https://doi.org/10.1111/j.1523-1739.2004.00491.x

Donato, D. C., Fontaine, J. B., Campbell, J. L., Robinson, W. D., Kauffman, J. B., & Law, B. E. (2006). Post-Wildfire Logging Hinders Regeneration and Increases Fire Risk. Science, 311(5759), 352[ndash]

352. https://doi.org/10.1126/science.1122855

Donato, D. C., Fontaine, J. B., Kauffman, J. B., Robinson, W. D., & Law, B. E. (2013). Fuel mass and forest structure following stand-replacement fire and post-fire logging in a mixed-evergreen forest. International Journal of Wildland Fire, 22(5), 652. https://doi.org/10.1071/WF12109

Emelko, M. B., Silins, U., Bladon, K. D., & Stone, M. (2011). Implications of land disturbance on drinking water treatability in a changing climate: Demonstrating the need for [ldquo]source water supply and protection[rdquo] strategies. Water Research, 45(2), 461[ndash]472. https://doi.org/10.1016/j.watres.2010.08.051

Frissell, C. A., Baker, R. J., DellaSala, D. A., Hughes, R. M., Karr, J. R., McCullough, D. A., Nawa, R. K., Rhodes, J., Scurlock, M. C., & Wissmar, R. C. (2014). Conservation of Aquatic and Fishery Resources in the Pacific Northwest: Implications of New Science for the Aquatic Conservation Strategy of the Northwest Forest Plan. Coast Range Association.

Furniss, T. J., Povak, N., Hessburg, P. F., Salter, R. B., Duan, Z., & Wigmosta, M. (2024). Wildfire management decisions outweigh mechanical treatment as the keystone to forest landscape adaptation. Fire Ecology, 20(1), 105. https://doi.org/10.1186/s42408-024-00339-y

Guenther, S. M., Gomi, T., & Moore, R. D. (2014). Stream and bed temperature variability in a coastal

headwater catchment: Influences of surface-subsurface interactions and partial-retention forest harvesting. Hydrological Processes, 28(3), 1238[ndash]1249. https://doi.org/10.1002/hyp.9673

Harmon, M. E., Ferrell, W. K., & Franklin, J. F. (1990). Effects on Carbon Storage of Conversion of Old-Growth Forests to Young Forests. Science, 247(4943), 699[ndash]702. https://doi.org/10.1126/science.247.4943.699

Harmon, M. E., Woodall, C. W., Fasth, B., Sexton, J., & Yatkov, Misha. (2011). Differences between standing and downed dead tree wood density reduction factors: A comparison across decay classes and tree species (No. NRS-RP-15; p. NRS-RP-15). U.S. Department of Agriculture, Forest Service, Northern Research Station. https://doi.org/10.2737/NRS-RP-15

Haugo, R., Zanger, C., DeMeo, T., Ringo, C., Shlisky, A., Blankenship, K., Simpson, M., Mellen- McLean, K., Kertis, J., & Stern, M. (2015). A new approach to evaluate forest structure

restoration needs across Oregon and Washington, USA. Forest Ecology and Management, 335, 37[ndash]50. https://doi.org/10.1016/j.foreco.2014.09.014

Hessburg, P. F., Prichard, S. J., Hagmann, R. K., Povak, N. A., & Lake, F. K. (2021). Wildfire and climate change adaptation of western North American forests: A case for intentional management. Ecological Applications, 31(8), e02432. https://doi.org/10.1002/eap.2432

Hudiburg, T., Law, B., Turner, D. P., Campbell, J., Donato, D., & Duane, M. (2009). Carbon dynamics of Oregon and Northern California forests and potential land-based carbon storage. Ecological Applications, 19(1), 163[ndash]180. https://doi.org/10.1890/07-2006.1

Hutto, R. L., & Gallo, S. M. (2006). The Effects of Postfire Salvage Logging on Cavity-Nesting Birds.

The Condor, 108(4), 817[ndash]831. https://doi.org/10.1093/condor/108.4.817

Jenkins, J. M. A., Lesmeister, D. B., Forsman, E. D., Dugger, K. M., Ackers, S. H., Andrews, L. S.,

McCafferty, C. E., Pruett, M. S., Reid, J. A., Sovern, S. G., Horn, R. B., Gremel, S. A., Wiens, J. D., & Yang, Z. (2019). Social status, forest disturbance, and Barred Owls shape long-term trends in breeding dispersal distance of Northern Spotted Owls. The Condor, 121(4), duz055. https://doi.org/10.1093/condor/duz055

Jennings, T. N., Smith, J. E., Cromack, K., Sulzman, E. W., McKay, D., Caldwell, B. A., & Beldin, S. I. (2012). Impact of postfire logging on soil bacterial and fungal communities and soil biogeochemistry in a mixed-conifer forest in central Oregon. Plant and Soil, 350(1[ndash]2), 393[ndash]411. https://doi.org/10.1007/s11104-011-0925-5

Kampf, S. K., Dwire, K. A., Fairchild, M. P., Dunham, J., Snyder, C. D., Jaeger, K. L., Luce, C. H., Hammond, J. C., Wilson, C., Zimmer, M. A., & Sidell, M. (2021). Managing nonperennial headwater streams in temperate forests of the United States. Forest Ecology and Management, 497, 119523. https://doi.org/10.1016/j.foreco.2021.119523

Kauffman, J. B., Beschta, R. L., Otting, N., & Lytjen, D. (1997). An Ecological Perspective of Riparian and Stream Restoration in the Western United States. Fisheries, 22(5), 12[ndash]24. https://doi.org/10.1577/1548-8446(1997)022<0012:AEPORA>2.0.CO;2

Keenan, R. J. (2015). Climate change impacts and adaptation in forest management: A review. Annals of Forest Science, 72(2), 145[ndash]167. https://doi.org/10.1007/s13595-014-0446-5

Kimmerer, R. W., & Lake, F. K. (2001). The Role of Indigenous Burning in Land Management. Journal of Forestry, 99(11), 36[ndash]41. https://doi.org/10.1093/jof/99.11.36

Knapp, E. E., & Keeley, J. E. (2006). Heterogeneity in fire severity with early season and late season prescribed burns in a mixed conifer forest. International Journal of Wildland Fire. 15:37-45, 15, 37[ndash]45. https://doi.org/10.1071/wf04068

Kreider, M. R., Higuera, P. E., Parks, S. A., Rice, W. L., White, N., & Larson, A. J. (2024). Fire suppression makes wildfires more severe and accentuates impacts of climate change and fuel accumulation. Nature Communications, 15(1), 2412. https://doi.org/10.1038/s41467-024-46702-0

Kreutzweiser, D. P., Capell, S. S., & Good, K. P. (2005). Effects of fine sediment inputs from a logging road on stream insect communities:a large-scale experimental approach in a Canadian headwater stream. Aquatic Ecology, 39(1), 55[ndash]66. https://doi.org/10.1007/s10452-004-5066-y

Kronland, W. J., & Restani, M. (2012). Effects of Post-Fire Salvage Logging on Cavity-Nesting Birds and Small Mammals in Southeastern Montana. The Canadian Field-Naturalist, 125(4), 316. https://doi.org/10.22621/cfn.v125i4.1260

Lacey, L. M., Suraci, J. P., Littlefield, C. E., Busse, B. S., & Dickson, B. G. (2025). Informing proactive wildfire management that benefits vulnerable communities and ecological values. People and Nature, 7(1), 52[ndash]66. https://doi.org/10.1002/pan3.10733

Law, B. E., Hudiburg, T. W., Berner, L. T., Kent, J. J., Buotte, P. C., & Harmon, M. E. (2018). Land use strategies to mitigate climate change in carbon dense temperate forests. Proceedings of the National Academy of Sciences, 115(14), 3663[ndash]3668. https://doi.org/10.1073/pnas.1720064115

Law, B. E., Moomaw, W. R., Hudiburg, T. W., Schlesinger, W. H., Sterman, J. D., & Woodwell, G. M. (2022). Creating Strategic Reserves to Protect Forest Carbon and Reduce Biodiversity Losses in the United States. Land, 11(5), 721. https://doi.org/10.3390/land11050721

Lesmeister, D. B., Davis, R. J., Singleton, P. H., & Wiens, J. D. (2018). Chapter 4: Northern Spotted Owl Habitat and Populations: Status and Threats (General Technical Report No. PNW-GTR-966; Synthesis of Science to Inform Land Management Within the Northwest Forest Plan Area, pp.

245[ndash]300). U.S. Department of Agriculture, Forest Service Pacific Northwest Research Station.

Long, J. W., Lake, F. K., & Goode, R. W. (2021). The importance of Indigenous cultural burning in forested regions of the Pacific West, USA. Forest Ecology and Management, 500, 119597. https://doi.org/10.1016/j.foreco.2021.119597

Marks-Block, T., Lake, F. K., Bliege Bird, R., & Curran, L. M. (2021). Revitalized Karuk and Yurok cultural burning to enhance California hazelnut for basketweaving in northwestern California, USA. Fire Ecology, 17(1), 6. https://doi.org/10.1186/s42408-021-00092-6

Marks-Block, T., Lake, F. K., & Curran, L. M. (2019). Effects of understory fire management treatments on California Hazelnut, an ecocultural resource of the Karuk and Yurok Indians in the Pacific Northwest. Forest Ecology and Management, 450, 117517. https://doi.org/10.1016/j.foreco.2019.117517

May, C. L., & Lee, D. C. (2004). The Relationships among In-Channel Sediment Storage, Pool Depth, and Summer Survival of Juvenile Salmonids in Oregon Coast Range Streams. North American Journal of Fisheries Management, 24(3), 761[ndash]774. https://doi.org/10.1577/M03-073.1

Mildrexler, D. J., Berner, L. T., Law, B. E., Birdsey, R. A., & Moomaw, W. R. (2020). Large Trees Dominate Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest. Frontiers in Forests and Global Change, 3, 594274. https://doi.org/10.3389/ffgc.2020.594274

Mildrexler, D. J., Berner, L. T., Law, B. E., Birdsey, R. A., & Moomaw, W. R. (2023). Protect large trees for climate mitigation, biodiversity, and forest resilience. Conservation Science and Practice, 5(7), e12944. https://doi.org/10.1111/csp2.12944

Miserendino, M. L., & Masi, C. I. (2010). The effects of land use on environmental features and functional organization of macroinvertebrate communities in Patagonian low order streams. Ecological Indicators, 10(2), 311[ndash]319. https://doi.org/10.1016/j.ecolind.2009.06.008

Nemens, D. G., Varner, J. M., & Johnson, M. C. (2019). Environmental effects of postfire logging: An updated literature review and annotated bibliography (No. PNW-GTR-975; p. PNW-GTR-975).

U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. https://doi.org/10.2737/PNW-GTR-975

North, M. P., Stephens, S. L., Collins, B. M., Agee, J. K., Aplet, G., Franklin, J. F., & Ful[eacute], P. Z. (2015).

Reform forest fire management. Science, 349(6254), 1280[ndash]1281. https://doi.org/10.1126/science.aab2356

Northwest Forest Plan Federal Advisory Committee (2024). Northwest Forest Plan Amendment: Federal Advisory Committee Recommendations to the U.S. Forest Service. 1-89.

Northwest Forest Plan Just Futures Collaborative (2025). Recommendations for Tribal Sovereignty and Environmental Justice in the Northwest Forest Plan Amendment Draft Environmental Impact Statement. Northwest Forest Plan Just Futures Symposium, Eugene, OR. https://blogs.uoregon.edu/nwfpjustfutures/resource-guide-for-making-public-comment/. Last accessed March 13, 2025.

Noss, R. F., Franklin, J. F., Baker, W. L., Schoennagel, T., & Moyle, P. B. (2006). Managing fire-prone forests in the western United States. Frontiers in Ecology and the Environment, 4(9), 481[ndash]487. https://doi.org/10.1890/1540-9295(2006)4[481:MFFITW]2.0.CO;2

Parks, S. A., Miller, C., Parisien, M.-A., Holsinger, L. M., Dobrowski, S. Z., & Abatzoglou, J. (2015). Wildland fire deficit and surplus in the western United States, 1984[ndash]2012. Ecosphere, 6(12), 1[ndash]

13. https://doi.org/10.1890/ES15-00294.1

Pollock, M. M., & Beechie, T. (2014). Does Riparian Forest Restoration Thinning Enhance Biodiversity?

The Ecological Importance of Large Wood. Journal of the American Water Resources Association, 50(3), 543[ndash]559.

Powers, E. M., Marshall, J. D., Zhang, J., & Wei, L. (2013). Post-fire management regimes affect carbon sequestration and storage in a Sierra Nevada mixed conifer forest. Forest Ecology and Management, 291, 268[ndash]277. https://doi.org/10.1016/j.foreco.2012.07.038

Spies, T.A., Stine, P.A., Gravenmier, R., Long, J.W., & Reilly, M.J. (eds). (2018). Synthesis of Science to Inform Land Management Within the Northwest Forest Plan Area (General Technical Report No. PNW-GTR-966). U.S. Department of Agriculture, Forest Service Pacific Northwest Research Station.

Steen-Adams, M. M., Charnley, S., McLain, R. J., Adams, M. D. O., & Wendel, K. L. (2019). Traditional knowledge of fire use by the Confederated Tribes of Warm Springs in the eastside Cascades of Oregon. Forest Ecology and Management, 450, 117405. https://doi.org/10.1016/j.foreco.2019.06.002

Stine, P., Hessburg, P., Spies, T., Kramer, M., Fettig, C. J., Hansen, A., Lehmkuhl, J., O[rsquo]Hara, K., Polivka, K., Singleton, P., Charnley, S., Merschel, A., & White, Rachel. (2014). The ecology and management of moist mixed-conifer forests in eastern Oregon and Washington: A synthesis of the relevant biophysical science and implications for future land management (No. PNW-GTR-897; p. PNW-GTR-897). U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. https://doi.org/10.2737/PNW-GTR-897

Syphard, A. D., Brennan, T. J., & Keeley, J. E. (2014). The role of defensible space for residential structure protection during wildfires. International Journal of Wildland Fire, 23(8), 1165. https://doi.org/10.1071/WF13158

U.S. Department of Agriculture and U.S. Department of Interior. (1994). 1994 Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl.

U.S. Department of Agriculture. (2024). Northwest Forest Plan Amendment Draft Environmental Impact Statement, Vols. 1 & 2. U.S. Forest Service Pacific Southwest and Pacific Northwest Regions.

van Mantgem, P. J., Caprio, A. C., Stephenson, N. L., & Das, A. J. (2016). Does Prescribed Fire Promote Resistance to Drought in Low Elevation Forests of the Sierra Nevada, California, USA? Fire Ecology, 12(1), Article 1. https://doi.org/10.4996/fireecology.1201013

ATTACHMENT-LETTER TEXT: COLW_NWFP_Amendment_DEIS_Comments_FINAL_wAttach.pdf; This is the same content that is coded in text box; it was originally included as an attachment