CENTRAL OREGON LANDWATCH

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Phone (541) 647-2930
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December 1, 2023

Jennifer Abernathy
NEPA Planner
Ochoco National Forest
3160 NE 3rd Street
Prineville, OR 97754

Re: Draft Environmental Assessment for the North Fork Crooked River Forest Resilience Project

Thank you for the opportunity to comment on the Draft Environmental Assessment ("EA") for the North Fork Crooked River Forest Resilience Project posted in the Bend Bulletin and at Ochoco National Forest & Crooked River National Grassland - Home (usda.gov) on November 1, 2023.

Central Oregon LandWatch ("LandWatch") is a conservation organization which has advocated for preservation of natural resources in Central Oregon for over 30 years. With over 750 members in Central Oregon, LandWatch has a long history of protecting the forests and streams in and around the Ochoco National Forest and the Paulina Ranger District. LandWatch's members and supporters live in Central Oregon, including on lands adjoining the Ochoco National Forest, and recreate in the Paulina Ranger District. They hunt, fish, take photographs, view wildlife, hike, drive, and engage in other recreational activities in the District, generally, and in the North Fork Crooked River Project area specifically.

LandWatch appreciates the time, effort and resources put forth by the Ochoco National Forest in developing the North Fork Crooked River Forest Resilience Project ("Project"). LandWatch shares many of the Forest Service's concerns related to improving resiliency in the face of climate change; improving the management of, and restoring Riparian Habitat Conservation Areas to attain Riparian Management Objectives; and in improving habitat for big game and other wildlife in the project area. However, we have several concerns with the project as proposed, which are detailed in the following comment. LandWatch also strongly recommends the Forest Service develop a more comprehensive approach to restoration, with site-specific plans that address the widespread degradation described in the EA, especially within riparian areas. This must include actions that address the ultimate drivers of habitat degradation, setting the Project area on a trajectory that will restore key ecological functions and processes, improve resiliency in the face of climate change, and successfully meet the many standards and guidelines that are failing due to current management.

I. An EIS is Required

This project requires an EIS based on the scale of project and the proposed treatments.

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An EA is used to "determine the significance of the environmental effects and to look at alternative means to achieve the agency's objectives," and is intended as a brief, faster route than an Environmental Impact Statement ("EIS") when an agency believes there will be minimum environmental impacts.[1] An EIS, on the other hand, is necessary when it becomes clear to an agency that the project will have significant environmental effects—the Draft EA makes these significant environmental effects clear.[2] Here, the widespread treatments over more than 37,000 acres, including within RHCAs, LOS and connectivity corridors, and with impacts to an expansive host of species, including but not limited to Redband trout, elk, and a declining mule deer population, rises to the level of significance that requires an EIS.

Further, this Project is very similar to the Black Mountain Vegetation Management Project ("Black Mountain"), which conducted an EIS.[3] Considering the North Fork Crooked River Project is larger than Black Mountain, substantially similar in the proposed actions, and adjacent to the Black Mountain project on the Ochoco National Forest, it is arbitrary and capricious for the Forest Service to decide here to do an EA and not an EIS.

As such, the Paulina Ranger District must conduct an EIS, not an EA, for the North Fork Crooked River Project.

II. Purpose and Need

The Draft EA states that the purpose and need for the project is to "improve forest resilience of the planning area to disturbance events such as insect and disease outbreaks, drought and wildfire; to create vegetation conditions needed to attain riparian management objectives; to promote adaptation to climate change; and a need to improve habitat security for big game" (EA at 3). As described in the EA, the Project is largely focused on conducting timber harvest to achieve the purpose and need, and to restore multiple habitat types and ecological processes within the project area. As discussed throughout this comment, this approach will largely fail to meet the purpose and need for the project. In other words, the EA fails to articulate a rational connection between the facts found and the conclusion made.[4]

For example, the Draft EA concedes that the Project's riparian areas have been heavily degraded by past forest management decisions and practices (See EA at 128, 135, 157, 159). Yet, the FS still proposes extensive logging, including commercial logging under Alternative 2, in these critically important but largely degraded habitats. As we discuss further in this comment, the proposed logging will negatively impact already degraded streams, directly in opposition to the stated purpose and need of creating conditions needed to attain Riparian Management Objectives ("RMOs"). Further, the proposed project fails to address many of the past activities described in

[1] *A Citizen's Guide to NEPA, Having Your Voice Heard,* Council on Environmental Quality, Executive Office of the President, January 2021; 40 CFR 1508.9 (Jan. 3, 2017); 40 CFR 1508.11 (Jan. 3, 2017)
[2] *Id.*
[3] Black Mountain Vegetation Management Project (2019), Paulina Ranger District, Ochoco National Forest, USFS USDA
[4] *Mtr. Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (The agency must "articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.")

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the EA as causing degradation, including livestock grazing and an extensive road network (See further discussion in the Riparian Habitat Conservation Area and Travel Management sections of this comment).

While some actions to restore large woody debris and establish more pools in streams within the project area are discussed—outcomes LandWatch supports—the restoration actions proposed are to cut trees in support of riparian area health. While removal of some conifers in specific locations, in conjunction with other actions may assist in restoration efforts, the simplified approach outlined to "restore" riparian areas falls far short of what the Forest Service's responsibilities are under Inland Native Fish Strategy ("INFISH") and the Ochoco Forest Plan. For example, the Forest Service should consider additional strategies to reconnect streams to their floodplains, restore hardwood plant communities through native plantings and enclosures, and improve bank stability, water quality, and plant community resilience. Importantly, this work cannot be developed and implemented in a vacuum; livestock grazing must be addressed in tandem, excluding cattle where restoration actions are implemented. Additionally, further road closures and decommissioning is required to truly restore and rehabilitate riparian areas, as well as other key wildlife habitats within the project area.

If the project focused on a more inclusive and holistic approach to restoring riparian areas, the Forest Service could much more effectively improve resilience to disturbance events, meet RMOs, adapt to climate change, and improve habitat security for big game across the project area (See additional discussion on this topic in the Riparian Habitat Conservation Area section of this comment). Unfortunately, the project as proposed will not achieve these goals, and therefore will fail to meet the stated purpose and need.

Further, given the EA's description of the high degree of overlap between big game security habitat and riparian areas, in order for the Forest Service to meet this part of the purpose and need, much more emphasis should be placed on comprehensive restoration strategies, in addition to closing and decommissioning more roads to provide meaningful security habitat.

In an EIS, the Forest Service must propose actions that more closely relate to the stated purpose and need. As proposed, the project will further impact Riparian Habitat Conservation Areas ("RHCAs") and retard attainment of RMOs, fail to adequately address key management factors related to adapting to a changing climate (e.g. livestock grazing and road network), and further impact habitat for big game across the project area.

III. Inadequate Range of Project Alternatives

The Project failed to evaluate a reasonable range of alternatives. NEPA requires the agency's environmental analysis documents to "[r]igorously explore and objectively evaluate all reasonable alternatives" to the Project.[5] The agency failed in excluding an alternative that

[5] 40 C.F.R. § 1502.14(a); Please be explicit about which version of the CEQ's NEPA regulations are being applied. We request that you apply the spirit, if not the letter, of the 1979 version of the regulations, given the legal and regulatory uncertainty surrounding the 2020 version

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incorporates greater protections for wildlife and riparian habitats, and meaningful landscape scale closure and decommissioning of roads.

Viable alternatives are alternatives that are feasible, meet the stated goals of the project, or are reasonably related to the purposes of the project.[6] The range of alternatives must also intend to find a Project alternative "that might enhance environmental quality or avoid some or all of the adverse environmental effects."[7] The Project lacks a reasonable range when there is the "existence of a viable and unexamined alternative," or when two action alternatives are deemed nearly identical.[8]

The EA makes clear that the two action alternatives are identical related to closing and decommission roads (See EA at 168, "There is no difference in maintenance level changes between alternatives 2 and 3."). Further, in the wake of *Greater Hells Canyon et al. v. Wilkes et al.* (2023), the range of alternatives should be re-analyzed as key aspects related to the logging of large trees in Alternatives 2 are no longer viable.[9]

In addition, feasible work related to the restoration of degraded riparian areas was not explored; instead, the Forest Service proposes timber harvest and prescribed burning as the primary actions for a riparian restoration strategy.

LandWatch recommends that the Forest Service consider in detail an alternative with the following provisions:

- No commercial logging in Riparian Habitat Conservation Areas
- A robust riparian restoration plan for explicitly identified areas within RHCAs (See RHCA section of this comment for additional details)
- Removal of livestock from all areas where treatments and restoration actions are proposed
- Cage and fence recovering riparian areas to exclude livestock
- Retain all trees ≥21" DBH in the project area
- Substantially decrease the number of roads open to motorized vehicles, including administrative access roads
- Decommission more roads to reduce impacts to streams and wildlife habitat, especially within RHCAs and identified special elk habitats
- Establish the project area road density based on all roads physically open to motorized vehicles, regardless of maintenance level

[6] *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233, 1246-47; See *W. Watersheds Project v. Abbey,* 719 F.3d at 1052 ("Feasible alternatives should be considered in detail.")
[7] 40 C.F.R. § 1500.8(a)(4).
[8] *Western Watersheds Project v. Abbey,* 719 F.3d 1035, 1050 (9th Cir. 2013); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 813-14 (9th Cir. 1999).
[9] *Greater Hells Canyon et al. v. Wilkes et al.*, U.S. District Court for the District of Oregon, case No. 2:22-cv-00859 (Findings and Recommendations, August 31, 2023)

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- Identify funding, develop explicit timelines, and create a monitoring plan for all proposed road closures and decommissioning
- Identify explicit leave patches, including details about their size and location on the landscape, based on key needs of focal wildlife within the project area
- Provide more measurable Resource Protection Measures to protect and facilitate habitat connectivity for wildlife within the project area, including within commercial and non-commercial thinning units
- Protect intact and functioning riparian areas from impacts related to livestock grazing, road development, and timber harvest practices
- Develop site-specific prescribed burn plans
- Take actions and coordinate with cooperating agencies to facilitate the reintroduction of beaver
- Conduct pre and post project monitoring of RMOs and other ecological indicators
- Adequately account for impacts on carbon release and climate change
- Do not conduct commercial or ground based mechanized treatments within Wild and Scenic River Corridors
- Do not rely on HRV to develop management targets and prescriptions

The proposed alternative we describe above represents an unexamined alternative; it is an ecologically sound option that avoids adverse environmental effects, upholds the Forest Service's other duties to protect wildlife and aquatic habitat, and supports the Project's purpose and need to create conditions needed to attain RMOs, improve big game security habitat, and promote adaptation to climate change. The Draft EA, however, does not include any combination of these actions and the analysis does not adequately describe how or why the purpose and need cannot be met if an alternative like LandWatch's is incorporated.

The Draft EA is inadequate without analyzing viable unexamined alternatives, and intensely considering a more ecologically sound course of action.[10] In an EIS, the Forest Service should include and analyze LandWatch's proposed alternative, which encourages more protection and restoration of wildlife and riparian habitat, removes all commercial logging in RHCAs, retains all large diameter trees, and more effectively addresses the Project's dense road system.

IV. Incomplete and Inaccurate Baseline Data

Information essential to facilitating meaningful public review and ensuring an informed agency decision is missing from the Draft EA. This includes information on: the Historic Range of Variability ("HRV") necessary to understanding past conditions and project justification for the proposed actions; key ecological information related to wildlife and their habitat, including special elk habitats, such as rutting, wallowing and calving; key data on baseline conditions in

[10] *Alaska Wilderness Recreation & Tourism v. Morrison*, 67 F.3d 723, 729 (9th Cir.1995); *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); *Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810 (9th Cir. 1987), rev'd on other grounds, 490 U.S. 332 (1989) (agency must consider alternative sites for a project).

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RHCAs; an accurate accounting of physically open roads experiencing motorized use within the project area; and discussion of significant new published and relevant scientific papers and reports.

a. Historic Range of Variability

LandWatch is concerned that the HRV data used to justify the amount and location of treatments and the logging of trees 21" DBH and over is based on inadequate baseline information. Under NFMA, the Forest Service must utilize the best available science, explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable.[11] Under NEPA, the Forest Service must maintain the professional and scientific integrity of discussions and analyses, which includes ensuring the inclusion and use of accurate scientific information and a duty to address scientific controversy.[12] Recent literature highlights ongoing concerns about the baseline model for HRV used in the Draft EA, calling into question whether the Project has incorporated the best available science, addressed scientific controversies around the HRV model used, as well as the validity of using HRV to inform management projects in general.

For example, Baker et al. (2023), asserts that the predominantly used model for HRV, which supports a low severity fire model, is based on outdated assumptions, omits critical data, and is not supported by the majority of current research. The omitted scientific data suggests a more accurate model for HRV in Western US dry forests is a mid-severity model. This means that instead of operating on the assumption that "dry forests were relatively uniform, low in tree density, and dominated by low- to moderate-severity fires," which are the assumptions under the "low severity" model, the Project should actually use the "mixed-severity" model, which assumes that "dry forests were heterogeneous, with both low and high tree densities and a mixture of fire severities" (Baker et al. 2023). This study extends its analysis to the impacts of using an incorrect HRV model to justify forest management decisions, finding:

> The four studies with adequate samples… showed that recent fire rotations were within or longer (413, 608, 695, 875, 1045, and 1693 years) than the historical range of 217–849 years documented by Baker, based on land-survey reconstructions, paleo-charcoal studies, and reconstructions from early aerial photographs…. This evidence shows that there is no ecological need to reduce high-severity fire through fuel reduction; doing so successfully would likely have effects similar to fire suppression, which is widely understood to have deleterious ecological effects.

LandWatch asks if the Draft EA's model for HRV incorporates the most up to date science, including the omitted data in Baker et al.'s analysis on HRV models to use in dry, Western forests.

[11] 36 C.F.R. § 219.3; *Earth Island Inst. v. Carlton*, 626 F.3d 462, 470 (9th Cir. 2010).
[12] 40 C.F.R. § 1502.24, 40 C.F.R. § 1500.1(b), 40 C.F.R. §§ 1502.9(b), 1502.12.

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The Project appears to be using the low severity HRV model, which is rooted in incomplete data, and at the very least, the difference in models for HRV is a scientific controversy that should be addressed and explained. The updated methodologies described in Baker et al. (2023) should be addressed by the Forest Service in an EIS, in addition to the ample research cited that supports frequent fire, old growth, mixed conifer forests as the historic make-up of dry eastside forests of the West. The impacts of an incomplete model for HRV have significant consequences for the design and analysis of the Project, as estimations for logging to restore HRV and account for fire behavior would all be overstated in the analysis (See EA at 34, "Fire regimes are a key component of historical range of variability (HRV) characterizations for forest and vegetation types").

Related, no information is provided about the process the Forest Service used for establishing key metrics of the HRV analysis. For example, no information is provided detailing how the Forest Service established their definition of Late Old Structure (LOS) stands by PAG, and what data or information was used to calculate the minimum number of large trees per acre needed for an area to quality as LOS (e.g. LOS in the Dry Grand Fir PAG is defined as having a minimum of 15 large trees per acre). Related, the EA goes on to describe structural classes, including "high density" LOS and "low density" LOS (See table 6, EA at 19), however no explicit thresholds are provided for determining whether an LOS stand is high density or low density, or what data was used to establish high and low density LOS metrics. Given the EA's HRV analysis for each PAG (see EA Figures 4-9) centers on the definition of these structure classes, and the justification for logging within LOS as proposed under alternative 2 is based in part on structure class M5a (high density LOS) being above HRV, its critically important that the data used to establish these structure classes, and principally, how the Forest Service determined appropriate thresholds between high and low density LOS, be made publicly available. Without that information, it's impossible to understand whether the agency is conducting an informed decision-making process or acting arbitrarily.

Further, the Project uses HRV to re-establish the historic range of tree species, tree density, and forest structure, but not to re-establish other forest conditions like overall biodiversity, road densities, grazing intensity and location, floodplain connectivity, herbaceous vegetation, riparian area function, sediment transport, soils, predator-prey dynamics, etc. If HRV is to be used to return forests to their historic conditions, the history cannot be viewed so narrowly as just looking at tree density, species, and structure; other key metrics of the forest condition—such as those listed above—must also be restored to historic ranges if this is the preferred model and strategy for designing forest management projects.

For example, the EA states that "[t]hese land uses [referring to logging, grazing, road construction, etc] also have increased erosional processes throughout the planning area (not just in RHCAs) above the natural range of variability" EA at 135. And "[g]razing and fire suppression have altered the species composition and tree density of upland forests, resulting in increased density of fire intolerant conifers such as grand fir and Douglas-fir and reduced the density of understory vegetation (Arno, 2000)" (EA at 101). The EA clearly states that livestock grazing, logging, and road development have been drivers behind changes to the landscape from what the Forest Service estimates the HRV for the project area to be. Yet, no action is taken to

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meaningfully address the full suite of these land uses to restore the landscape back to the Forest Service's defined HRV. Further, the EA fails to establish HRV metrics for soils, biodiveisty and species composition beyond tree species, density, and structure.

Additionally, research from the USDA Forest Service, Pacific Southwest Research Station, supports that HRV is an inappropriate tool for developing management targets and prescriptions, especially in regard to "ecosystem Management" approaches, and when present and future projected climates are different than the historic climate (Millar 2014). LandWatch therefore questions the utility of designing a project with significant logging, intended to reduce stands to modeled HRV conditions, when climate change is having, and is projected to have profound impacts on landscapes in the project. As it relates, we are concerned the Draft EA has not met its legal duty under NEPA to adequately consider the Project's climate impacts, and, conversely, the effects of climate change on the Project area.[13]

In an EIS, the Forest Service should use an HRV model that reflects dry forests that were heterogeneous, with both low and high tree densities and a mixture of fire severities. Further, HRV should not so strictly determine how the Project is designed, as we need to let forests evolve and adapt to our future climate, not "restore" them to a past structure, represented by a climate regime that no longer exists. Instead, the Project should focus on actual ecological restoration that benefits wildlife and aquatic processes. Lastly, the Forest Service must provide the data used to develop LOS tree densities for each PAG, and thresholds between structure classes within LOS.

b. Riparian Habitat Conservation Areas

The EA makes clear that improving conditions in RHCAs is a key part of the purpose and need for the project (EA at 127). Yet, as discussed further in the RHCA section of this comment, the Forest Service has made almost no effort to collect key data and establish an accurate baseline of the current condition of these critically important features within the project area.

Appendix E of the Draft EA shows the stream survey data the FS has collected within the project area. Only 4 stream reaches out of the 48 that have been surveyed in the past 30 years were surveyed in the past 3-5 years, which the Forest Service describes as the data that best reflects current management (See EA at 137). And of those four reaches, most of the RMOs were found to be failing or had no data available (See Table 1 below). The minimal data on stream condition within the project area fails to satisfy both NEPAs hard look and accurate environmental baseline standards.

[13] 88 FR 1196, CEQ "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change," https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate

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Location	Protocol	Year	Dry Channel (%)	Wetted Width (ft)	Pools / Mile	Avg Residual Pool Depth (ft)	Stable Banks (%)	Fine Sediments (%)	LWD/ Mile (>12 in)	Hardwood Shade (%)	Total Shade (%)	W/D Ratio	Entrenchment Ratio
Roba Creek 1041	PIBO	2019	---	---	252.7	0.3	100	27.4	---	---	---	11.4	---
Fox Canyon Creek 2058	PIBO	2019	---	---	111.4	0.6	100	8.7	---	---	---	30	---
Fox Canyon Creek R1	R6	2020	81.1	4	16.2	1.1	95.2	2.3	4.4	36.7	65.8	29.9	1.6
Donnelly Creek R1	R6	2020	99.8	0.13	0.6	0.5	95.4	19.4	22.9	12.6	73.4	---	---

Table 1. Relevant available data from Region 6 Level II surveys and PACFISH/INFISH Biological Opinion (PIBO) Monitoring completed in the past 5 years. Green = RMOS are being met, red = RMOs not being met, dashed line = no data available.

Given the outsized importance of riparian areas to wildlife and ecological processes in the project area, and the requirements under NEPA to establish an accurate environmental baseline, it is critically important that the Forest Service collect the necessary baseline data on riparian areas within the project area. This should include data related to INFISH RMOs, DEQ temperature standards, and necessary data on entrenchment, hardwood shade, and other ecological indicators that are incomplete or missing from Appendix E.

c. Special Elk Habitat

The EA states clearly that part of the purpose and need for the project is to improve habitat security for big game. Yet, like RHCAs, the Forest Service has not collected important data required to establish an accurate baseline on current conditions for special elk habitat.

In numerous places throughout the EA, the Forest Service states that collecting data on, and identifying special elk habitat is infeasible (See EA at 69, discussing calving sites; EA at 70 discussing wallows). Instead, the Forest "estimates" where these habitats might occur through a black box process that resulted in the identification of a minimal amount of habitat within the project area.

In other words, the Draft EA fails to provide specific information about the current locations and distributions of elk calving, wallowing, and rutting sites within the Project area. Without this information the Draft EA analysis is based on an inadequate baseline, and the imprecise

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information, paired with inadequate project resource protection measures ("RPMs"), makes it impossible to show the Project's compliance with Ochoco Forest Plan Standards and Guidelines for Rocky Mountain Elk. These standards and guidelines require the Forest Service to: "Protect the character of elk calving sites. Minimize disturbance from human activity during calving season (approximately May 15 to June 30). Also protect wallows during rutting season (September 1 to October 15)."[14] As stated in a previous case on this same issue: "[W]ithout data identifying the location of calving sites and wallows, the Forest Service cannot meet its obligation to protect those sites or minimize disturbance to them."[15] Here, the Draft EA as prepared cannot meet its obligation to protect or minimize disturbance to elk calving and wallowing habitat, and therefore cannot comply with the Ochoco Forest Plan.

The general analysis of calving, rutting, and wallowing habitat—which omits precise locations, their quality, and where locations may exist in relation to Project treatments—violates NEPA's requirements that the agency take a "hard look" at the Project's environmental impacts, and to guarantee that the public receives accurate information about those impacts.[16] This results in inadequate baseline data and prevents the Forest Service from disclosing and analyzing the Project's direct, indirect, and cumulative impacts.[17]

d. Roads

Transportation management is a key part of the proposed project and essential to meeting multiple aspects of the purpose and need, including related to the improvement of RHCAs, big game habitat, and in promoting adaptation to climate change. However, the Forest Service failed to establish an accurate baseline of the road network, and therefore failed to properly analyze the impacts from motorized use within the project area on relevant resources.

In describing the existing road densities within the project area, the EA states:

> Currently, the open road densities within the project area are as follows: General Forest – 2.4 mi/mi2, General Forest Winter Range – 1.0 mi/mi2, and Winter Range – 1.1 mi/mi2 (Table 29). These road densities meet Forest Plan standards and guidelines in General Forest and General Forest Winter Range and are above the density standards in Winter Range. *Surveys performed in 2021 documented vehicle use of maintenance level 1 (closed) roads.*

(EA at 70) (emphasis added). Even with direct evidence of recent vehicle use of closed roads within the Project area, the Forest Service still only includes open roads (Maintenance Level 2-5)

[14] Ochoco Forest Plan- LRMP (1989), Chapter 4, Section 3- Rocky Mountain Elk and Mule Deer 4-246: Protect wallows during rutting season, September 1 to October 15, Protect the character of elk calving sites; Minimize disturbance from human activity during calving season, May 15 to June 30
[15] *WildEarth Guardians v. Jeffries* ("*Guardians*"), 370 F. Supp. 3d 1208 (D. Or. 2018); *see also id.* at 1221.
[16] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1083 (9th Cir. 2011); *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998); 40 C.F.R. § 1500.1(b).
[17] *Guardians*, 370 F. Supp. 3d at 1240 (citing Klamath Siskiyou Wildlands Ctr. v. U.S. BLM, 387 F.3d 989, 994–96 (9th Cir. 2004)); see also 40 C.F.R. § 1502.22, 40 CFR 1508.7 "Cumulative impact"

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in the project road density analysis. This is alarming given even the open road density analysis shows road densities above Forest Plan standards and guidelines, and recent surveys indicate that the impacts of the road network are much greater than described in the EA.

The Forest Service must establish an accurate baseline of road density within the project area to comply with NEPA's "hard look" mandate, as the agency must maintain inventories or otherwise collect and disclose information about the resources it manages.[18] This is done so an adequate baseline exists to evaluate the environmental impacts of a proposed action.[19]

Here, the failure to establish an accurate baseline of motorized vehicle use within the project area has major implications for multiple resource values within the project area, including wildlife and their habitat, streams and associated sediment loads, fire risk, and the spread of invasive species. In an EIS, the Forest Service must include the mileage of all maintenance level roads (ML 1-5) that are "functionally" open on the landscape, as well as all user created roads. And especially so, since the Forest Service accounted for all "open on the ground" roads in the wildlife core habitat analysis (See the Draft EA's Appendix C at 1 for discussion of methods used for the core habitat analysis, which did not use maintenance levels but instead considered whether it "was reasonable to assume that the road was receiving any use" including from the public).

V. Logging Trees Large Trees

The 1995 Eastside Screens[20] must be applied across all Project alternatives. As the Forest Service is aware, Judge Hallman of the District of Oregon recently ruled that the Forest Service's 2021 Amendment to the Eastside Screens which eliminated the 21-inch rule was unlawful under NFMA, NEPA and the ESA and that the Screens Amendment should be vacated.[21] Vacatur of the Screens Amendment results in the reinstatement of the 21-inch rule as the controlling Forest Plan standard with which this project must be consistent.[22] Relevant here, the 1995 Eastside Screens prohibit logging trees >21' DBH inside LOS stands under Scenario A. This is made clear by a 1995 interpretive memorandum from the Regional Forester, which states:

> "… the intent of the screens is to maintain, in the short-term, all features of late and old structure, whether the stand is actually LOS or not. … For additional

[18] *See Neighbors of Cuddy Mtn. v. U.S. Forest Serv.*, 137 F.3d 1372, 1379–80 (9th Cir. 1998).
[19] *Id.*
[20] Ochoco National Forest Land and Resource Management Plan (1989), as amended by the 1995 Decision Notice for the Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (i.e. 1995 Eastside Screens)
[21] *See Greater Hells Canyon Council v. Wilkes*, Case No. 2:22-cv-00859-HL, ECF 97 (August 31, 2023).[21] *A Citizen's Guide to NEPA, Having Your Voice Heard,* Council on Environmental Quality, Executive Office of the President, January 2021; 40 CFR 1508.9 (Jan. 3, 2017); 40 CFR 1508.11 (Jan. 3, 2017)
[21] *Id.*
[21] Black Mountain Vegetation Management Project (2019), Paulina Ranger District, Ochoco National Forest, USFS USDA
[21] *See Greater Hells Canyon Council v. Wilkes*, Case No. 2:22-cv-00859-HL, ECF 97 (August 31, 2023)
[22] 16 U.S.C. § 1604(i)

> clarification, the screen direction under Scenario A of the wildlife standard is intended to maintain all live trees >21 inches regardless of tree species and regardless of whether a stand is LOS or not. *The existing wording in Scenario A could be* ***erroneously*** *interpreted to mean that large trees >21 inches "could" be cut in LOS in some instances. We regret the ambiguous wording used in writing Amendment #2.* The intent of Scenario A is as stated above."[23]

While the 1995 Eastside Screens did describe that "timber harvest in Multi-strata with Large trees, like a thinning from below, can be implemented, consistent with the wildlife standard" within LOS, the Regional Forester's memo clarified that this did not include removal of trees >21 inches.

Further, the Ochoco National Forest has also recognized that logging trees >21 inches within LOS is not permissible under Scenario A of the 1995 Eastside Screens. In the Final Record of Decision ("ROD") for the Black Mountain Project, in response to one commenter's request that the Forest Service include an alternative that allowed for harvest of trees >21 DBH inches, the Forest Service responded:

> An alternative that allows for the limited harvest of young shade tolerant/ fire intolerant trees >21 inches diameter at breast height (DBH) was considered but eliminated from further study (FEIS 24). The Regional Forester's Forest Plan Amendment #2 (Eastside Screens) prohibits the commercial removal of trees greater than or equal to 21 inches DBH, regardless of age. In order to remove young trees greater than or equal to 21 inches DBH in the vicinity of old trees as part of the Black Mountain project, an amendment to the Eastside Screens would be required.[24]

The Black Mountain ROD's Appendix D is included as part of these comments as Attachment A.

The Forest Service doubled down on this point in response to objections on the Black Mountain project, finding that:

> The Responsible Official appropriately applied the Eastside Screens and the development of an alternative that allowed the removal of trees >21" would, in fact, require a Forest Plan amendment.[25]

The Black Mountain Objection Response letter is included as part of these comments as Attachment B. In both cases, the Forest Service makes clear that development of an alternative

[23] John Lowe, Nov 14, 1995, File Code: 2430, USDA Pacific NW Region; "Subject: Regional Forester Amendment #2 Implementation – Umatilla NF Trip."
[24] Black Mountain Vegetation Management Project Record of Decision (2019), Appendix D at p80. Paulina Ranger District, Ochoco National Forest, USFS USDA
[25] Jefferies, Shane. 2019. Black Mountain Vegetation Management Project Objection Response Letter. Paulina Ranger District, Ochoco National Forest, USFS USDA

that proposes the removal of trees >21 inches does not conform to Scenario A of the 1995 Eastside Screens.

To conform to the 1995 Eastside Screens large tree logging must be removed from all Project alternatives.

VI. Scale of Analysis

Under the 1995 Eastside Screens, the Forest Service is directed to conduct their analysis at the watershed scale (See 1995 Eastside Screens Appendix B revised, discussing how to conduct the HRV analysis and directing the FS to "[c]haraterize the proposed timber sale *and its associated watershed* for patterns of stand structure by biophysical, environment and compare to the Historic Range of Variability") (emphasis added).[26] Here, the Draft EA's scale of analysis is the project area, not the watershed, thus failing to establish the proper scale for the HRV analysis. In an EIS, the Forest Service should conduct the analysis at the watershed scale.

VII. Riparian Habitat Conservation Areas

As the EA describes, improving and maintaining RHCAs is a key part of the purpose and need for the North Fork Crooked River project (EA at 3, EA at 127). The Inland Native Fish Strategy ("INFISH") "defines RHCAs as portions of watersheds where riparian-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines (USDA 1995a). Riparian Management Objectives ("RMOs"), which are to be considered at a landscape scale, contribute to optimum habitat for fish and serve as indicators of watershed health" (EA at 134).

The two action alternatives fail to take appropriate and reasonable actions to address the widespread failure in meeting RMOs within the project area. While the data the Forest Service presents in the Draft EA on stream condition is extremely limited, it paints a damning view of how current management is failing to adhere to INFISH standards and guidelines. To attain RMOs and promote adaptation to climate change, the Forest Service must take a more comprehensive and ecologically sound approach to restoration and management of riparian areas that truly addresses the drivers of habitat degradation. The failure to do so will result in the continued decline of RHCAs and riparian condition across the project area, in violation of the standards and guidelines of INFISH and the Ochoco Forest Plan.

a. Addressing Drivers of Habitat Degradation

Appendix E of the Draft EA provides an overview of the relevant available data from Region 6 Level II surveys and PACFISH/INFISH Biological Opinion Monitoring within the project area. As discussed earlier in this comment, the data presented in Table 82 of Appendix E is outdated

[26] Ochoco National Forest Land and Resource Management Plan (1989), as amended by the 1995 Decision Notice for the Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (i.e. 1995 Eastside Screens)

and incomplete; of the 48 stream reaches that have been surveyed within the project area over the past 30 years:

- 32 stream reaches were last surveyed in the 1990s and 2000s.
- 16 stream reaches were last surveyed between 2009-2020
- Only 4 stream reaches were surveyed in the past 3-5 years

While the data has many limitations, overall the data collected over the past 30 years shows streams in the project area are largely in a degraded condition. Table 82 of Appendix E shows that of the six RMOs represented by data, half are failing across a majority of the stream reaches surveyed. The EA provides further detail on the failure to meet RMOs throughout Chapter 3:

- "[T]hirteen percent (5 out of 39) of the W/D [width to depth] ratios in the project area are *meeting* INFISH standards" (EA at 153) (emphasis added). Another 9 stream reaches included in in Table 82 of the Appendix E have no data recorded at all, meaning the actual percentage of streams failing this standard is likely much higher.

- "Water temperature has not met INFISH standards in any of the years of available data" (EA at 129). This data was summarized from just one data logger within the 37,000-acre project area.

- "Observations from data collected from the early 1990s through present indicate that most of the streams within the project area are not meeting management objectives of 80% shaded surface or greater (Table 82, Appendix E)" (EA at 129). Appendix E shows 83% (10 out of 12 stream reaches) of the streams where shade was measured in the project area are *failing* INFISH standards; another 37 stream reaches included in Table 82 have no data available.

To address the widespread failure of RHCAs in meeting RMOs, the Draft EA's action alternatives propose to log and cut down conifers within RHCAs to promote hardwood recovery, create additional pool habitat, and reduce sediment transport (EA at 139). However, this approach is extremely problematic, and fails to address multiple factors identified in the EA as the underlying drivers of stream degradation or key restoration needs essential to recovery. These factors are detailed further below.

i. Floodplain Connectivity

The EA states that "[m]any channels in the project area are in an incised state and are degraded" (EA at 127). The EA goes on to say that:

> In incised channels, the increased shear stress of peak flows scour the bed and banks of the channel rather than spilling over onto the floodplain resulting in a lowered water table and decreased base flows. This process creates a condition

> that lowers water tables and reduces the water available to support riparian vegetation, which has allowed for the establishment of xeric species and an overstocking of conifers.

(EA at 128). In other words, a fundamental driver behind the change in species composition within riparian areas is that streams are disconnected from their floodplains. As such, to effectively reestablish hardwoods and other desirable riparian plant communities, the Forest Service must first address floodplain connectivity and the incised state of streams. Without reconnecting streams to their floodplains, xeric conditions will persist and the restoration of native riparian plant communities—including hardwoods—will fail. This is especially concerning given the many assumptions included in the EA about how removing conifers will ultimately lead to an "abundance of hardwood species," and an array of ecological benefits (See discussion of direct and indirect effects of alternative 2 in EA at 158).

To put it simply, the assumption that cutting down conifers alone will effectively restore hardwoods across the project area RHCAs is fundamentally flawed. This flawed assumption, which is relied upon throughout the EA's analysis, has major implications for the validity of the EA's environmental impact analysis, including on key metrics related to shade, temperature, sediment, livestock grazing, aquatic food sources, and fire (See discussions in EA at 139, 143, 144). In other words, the EA fails to articulate a rational connection between the facts found and the conclusion made.[27]

Perhaps the most concerning of the potential impacts of the proposed project are related to shade and stream temperature. Both action alternatives will lead to an immediate decrease in shade within riparian areas, a key metric that is closely tied to stream temperature. As discussed earlier, 83% of surveyed streams are already failing to meet INFISH standards for shade cover, and no data collected in the project area has ever met INFISH water temperature standards. The EA assumes that removing conifers alone will ultimately lead to an "abundance of hardwood species" which will in the long term, improve shade cover along streams, and therefore reduce stream temperatures. As discussed above, this is a fundamentally flawed approach to restoration that will retard attainment of RMOs and lead to further degradation of riparian areas in the Project area.

To effectively address the failure to meet INFISH standards and guidelines, and to meet the purpose and need of the project, the Forest Service must propose a more robust restoration strategy for riparian areas that includes addressing incised channels and issues related to floodplain connectivity.

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

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ii. Livestock grazing

The EA makes numerous references to the negative impacts of livestock grazing on riparian area plant communities, bank stability, instream habitat, and overall stream condition. Examples include:

- "Historically, Redband trout may have occupied more aquatic habitat within the NFCR project area than presently. Road densities, livestock grazing, timber harvest, and mining have contributed to a reduction in suitable habitat and increased fish passage barriers" (EA at 128)

- "Past land uses of historic livestock grazing and timber harvest practices, beaver trapping, road construction, and fire suppression have reduced the functioning condition of RHCAs." EA at 135

- "Past management actions including the exclusion of fire, intensive grazing and removal of beaver have decreased the amount and quality of pool habitat within the watershed." Ea at 157

- "Cattle may have caused shifts in plant species composition and abundance through selection of more palatable forage species. This reduction of plant or shrub abundance may reduce riparian vegetative condition along stream banks along with livestock hoof shear on steam banks may affect bank stability provided by a robust riparian hardwood community. This effect in turn may result in an increase in sediment input that has been shown to result in a reduction in pool depth over time." EA at 159

Even after identifying livestock grazing as one of the key management drivers that has led to the degradation of riparian areas within the project area, the Forest Service makes no attempt to change livestock grazing to attain INFISH standards and guidelines, a key purpose and need of the project.

Even within the Project area there is a powerful example of how removing livestock can substantially improve riparian area conditions; the only sub-watershed within the project area that is currently recognized by the Forest Service as properly functioning is where livestock grazing was removed in 2005. As the EA explains:

> A 2005 assessment of the North Fork Crooked River found the lower section …to be functioning at risk/ properly functioning with an improving trend (USDA Forest Service 2005). Subsequently, this section was closed from grazing in 2005. This improved condition is reflected in the properly functioning rating of the overall Rough Canyon Creek subwatershed.

(EA at 134). To effectively restore the degraded state of riparian areas across the project area and create the conditions necessary to attain RMOs, the Forest Service must address livestock grazing. This must include exclusion of livestock from all riparian areas where

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treatments and restoration actions are proposed, including prescribed burning and thinning.

iii. Roads

The EA makes numerous references to the impact of roads on the ecology of the project area. Examples include:

- "Upland forest suitable habitat has been negatively impacted by roads, trails, and invasive plant infestations. Roads alter runoff patterns, can contribute to soil erosion, fragment native plant communities, and provide corridors for invasive species infestations as vehicles and animals use roads and trails to travel. To support past timber harvest activities, many roads were built in upland forest habitat. Many of these roads remain on the landscape as open system roads" (EA at 101)

- "Roads are known to be primary contributors of sediment to streams. Decreasing road density will have a direct reduction in sediment transport into streams" (EA at 152)

- "The creation/opening of temporary roads will result in a short-term increase in sediment delivered to the stream network which could negatively impact the amount and quality of pool habitat in the project area" (EA at 159)

- "Opening maintenance level 1 roads to administrative maintenance level 2 status would have adverse impacts to soil, water, vegetation, and wildlife habitat conditions…. Increased traffic on previously closed roads may reduce secure habitat for big game" (EA at 169)

Yet, as described in the Travel Management section of this comment, the proposed action alternatives result in a net increase in the motorized road network within the project area. To properly restore RHCAs and create the conditions needed to attain RMOs, the Forest Service must close and decommission more roads, reduce the overall density of the road network, and drastically limit the use of temporary roads for logging.

iv. Adapting to Climate Change

The EA describes a list of actions that the Forest Service could take to assist fisheries and aquatic habitat in adapting to climate change, a key part of the projects purpose and need. For example, the EA states:

> **Adaptation options**: Primary adaptation strategies for fisheries and aquatic habitat focus on storing more water on the landscape, increasing resilience to disturbance, maintaining and restoring riparian and wetland vegetation complexity, and maintaining and restoring natural thermal conditions in streams. Specifically, managers can protect springs, increase shallow groundwater storage,

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> increase soil water storage by maintaining or restoring riparian vegetation, and encourage beaver populations. Minimizing the impacts of roads and grazing may help offset increases in sediment yield, and increasing water conservation can help maintain summer flows. Implementing fuel treatments across the landscape may help reduce fire severity, in turn reducing erosion that degrades aquatic systems. Adaptation tactics will be most efficient if they are coordinated with existing stream management and restoration efforts conducted by the Forest Service, other agencies, and private landowners.

(EA at 140). While this list largely does not include recommendations on *how* to implement these strategies, it does recommend to "minimize the impacts of roads and grazing." Yet, the Forest Service proposes to only cut and log conifers to assist riparian areas in adapting to climate change while increasing the overall miles of roads open to motorized travel and altogether ignoring grazing impacts. As described below, a more comprehensive strategy is required to implement these primary adaptation strategies for fisheries and aquatic habitats.

v. Recommendations for Addressing RHCA Degradation and Attaining RMOs

The Forest Service should develop site specific restoration plans for RHCAs, with detailed plans for how streams that are currently failing RMOs will be restored to the condition needed to attain RMOs. A key part of this is addressing the drivers of habitat degradation (roads, grazing, timber harvest, etc.), while also restoring key ecological functions necessary to the restoration of plant communities and overall stream health.

Site specific restoration plans, at a minimum, should include:

- Identification of discrete areas where restoration actions are proposed (i.e. restoration footprint)
- Floodplain restoration plan for each site, as appropriate
- Planting of hardwoods and other native species to reestablish native plant communities where streams are connected with their floodplain and/or where otherwise appropriate
- Exclusion of livestock from restoration areas
- Decommissioning and closing roads within RHCAs
- Identification of funding, development of a timeline and a detailed monitoring plan for all road closures and decommissioning
- A plan to increase large woody debris in stream channels to increase pool frequency, through minimal non-commercial, non-mechanized thinning, while also ensuring medium and large conifers remain within riparian areas for future large wood recruitment
- Development of a site-specific prescribed burn plan
- Protection of intact and functioning riparian areas from impacts related to livestock grazing, road development, and timber harvest practices

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- Develop action plan and coordinate with cooperating agencies to facilitate the reintroduction of beaver
- No commercial logging in RHCAs
- Pre and post project monitoring of RMOs and other ecological indicators to assess project effectiveness

b. No Commercial Logging in RHCAs

The Project will be in violation of the Inland Native Fish Strategy ("INFISH") (1995)[28] standards if the action alternatives conduct commercial harvest or thinning in RHCAs. INFISH, which covers approximately 25 million acres of National Forest System lands, includes scientifically supported measures to protect habitat and populations of native inland fish.[29] INFISH was written for all interior native fish species and not just bull trout, and only allows commercial logging in RHCAs in very narrow circumstances, when treatments are needed to attain RMOs. INFISH standards clearly specify that no activity can be done that retards attainment of these RMOs. In other words, INFISH prohibits treatments that will potentially compromise fish habitat, including impacts to shade, water temperature and sediment. All of the action alternatives, as described, will cause impacts to aquatic species and their habitats within RHCAs. This is supported by several expert opinions written for other projects across the Ochoco National Forest with similar riparian and large tree treatments, which can be found in Attachment C of this comment.

Further, the Ochoco Forest Plan Standards and Guidelines are applied to all Forest streams, not just the tributaries where bull trout reside. The Ochoco Forest Plan's Treatment of Activity Fuels section describes desired riparian fuel treatments as:

> Fuel treatment (particularly mechanical treatments) should be very limited within riparian areas. In particular, activities which reduce the shading potential or woody debris sources of the site should be avoided. Greater levels of wildfire risk are acceptable in these areas. Non-Mechanized treatments will receive preference. When mechanized treatments are necessary, they shall be carefully managed to meet the objectives of the management area.[30]

Standard and Guideline TM-1 further states:

> Prohibit timber harvest, including fuelwood cutting, in Riparian Habitat Conservation Areas, except as described below.

[28] USDA, Forest Service. 1995. Pacific Anadromous Fisheries Habitat (PACFISH), U.S. Forest Service and U.S. Bureau of Land Management. 1994. Environmental assessment for the implementation of interim strategies for managing anadromous fish-producing watersheds in eastern Oregon, Washington, Idaho, and portions of California. Washington, DC: U.S. Department of Agriculture, Forest Service. p 68
[29] INFISH 1995; Federal Register / Vol. 60, No. 150 / Friday, August 4, 1995 / Notices 39927
[30] Ochoco National Forest & Crooked River National Grassland, Ochoco Forest Plan- Land and Resource Management Plan (1989), Chapter 4, Section 3, p 4-134

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> …b. Apply silvicultural practices for Riparian Habitat Conservation Areas to acquire desired vegetation characteristics where needed to attain Riparian Management Objectives. Apply silvicultural practices in a manner that does not retard attainment of Riparian Management Objectives and that avoids adverse effects on inland native fish.[31]

Commercial logging in RHCAs is inappropriate even with the Project's identified RPMs because commercial logging in RHCAs would retard attainment of RMOs and negatively affect inland native fish, such as Redband trout. As discussed elsewhere in this comment, many of the RMOs in the project area are either not fully assessed or are largely not being met across the project area. Research shows that treatments and any temporary roads needed to complete these treatments will have further negative impacts on these RMOs (Yonce et al. 2021).

Further, the Draft EA fails to comply with the Ochoco Forest Plan's TM-1 and with the "treatment fuels in riparian areas" philosophy with its commercial logging proposal, as the Draft EA appears to modify RHCA widths for logging without supplying an adequate explanation for the change. INFISH sets RHCA widths to provide stream shading and protect waterbodies from sediment and other ecological harms.[32] These widths are accomplished through mandatory buffers around Category 1–4 waterbodies.[33] The Draft EA, however, states that vegetation management activities are proposed within categories 1, 2, 3, and 4 RHCAs, but does not confirm that the respective mandatory buffers are applied to these waterbodies. Instead, for Alternative 2 the EA states that:

> Thinning in riparian habitat conservation areas will include site-specific prescriptions where commercial thinning is proposed in Category 1 and 2 RHCAs (i.e., fish-bearing streams and perennial non-fish bearing streams). Prescriptions will be developed based on slope, aspect, stream condition, soil condition, existing vegetation, large woody material, and other factors at each Category 1 or 2 site.

(EA at 13). This appears to modify the mandatory buffers of INFISH. The Draft EA has not gone through the proper procedures to alter these buffers and is therefore out of compliance with INFISH and the Ochoco Forest Plan. At a minimum, this lack of clarity in the Draft EA concerning the width of INFISH RHCA buffers that will be applied to the various streams in the Project area does not satisfy NEPA's requirement for disclosure of environmental effects. The Forest Service must restore the INFISH RHCA mandatory buffers around Category 1–4 waterbodies and disclose their location in the Project area and treatment implementation schedule.

[31] Inland Native Fish Strategy, TM-1 (Timber Management), A-7
[32] INFISH Decision Notice and FONSI (1995), Attachment A at A-5 to A-6.
[33] *Id.*

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Additionally, the risk of fire in riparian areas does not justify heavy commercial logging in RHCAs. For example, the EA states there was a lack of modeled difference between Alternative 2 and 3 in fire behavior (See EA at 41), where Alternative 2 proposes commercial and non-commercial logging and Alternative 3 proposes non-commercial only in RHCAs. Regardless, it's important to note that the Ochoco Forest Plan's Standards and Guidelines for Treatment of Activity Fuels states: "[f]uel treatment (particularly mechanical treatments) should be very limited within riparian areas…*Greater levels of wildfire risk are acceptable in these areas*" (emphasis added).[34]

Further, the Ochoco Forest Plan, in describing desired conditions in the MA-F15 riparian areas, states "[w]here coniferous evergreens are a natural component of the ecosystem, a variety of size classes will exist to perpetuate the supply of shade and woody debris over time."[35] The Project continually targets coniferous evergreens in riparian areas despite the Forest Plan discouraging commercial logging of coniferous evergreens in RHCAs and calling for a variety of tree sizes to maintain both shade and woody debris over time.

The Forest Service should remove all commercial logging in RHCAs from the Project, restore INFISH RHCA mandatory buffers around category 1-4 waterbodies, and allow only hand-thinning treatments in non-commercial units where the Forest Service can demonstrate non-commercial thinning will not retard attainment of RMOs.

c. Section 303(d) List of Water Quality Limited Waterbodies

Clean Water Act § 303 establishes the system under which states and the federal government cooperatively develop water quality standards, which apply regardless whether pollution comes from point sources or nonpoint sources.[36] The CWA does not define the term "nonpoint sources," but the Ninth Circuit has stated that, in contrast to point sources, "[n]onpoint sources of pollution are non-discrete sources; sediment run-off from timber harvesting, for example, derives from a nonpoint source."[37] Water quality standards specify, and then protect, the desired conditions of each waterway within the state's regulatory jurisdiction.[38] States are responsible for developing water quality standards applicable to water bodies within their borders, subject to federal confirmation that the standards comply with the requirements of the CWA.[39]

Water quality standards are the benchmarks by which the condition of water bodies is measured: water bodies that do not meet these benchmarks are deemed "water quality-limited" and placed

[34] Ochoco Forest Plan- Land and Resource Management Plan (LRMP) (1989), Chapter 4, Section 3, p 4-134, emphasis added
[35] Ochoco Forest Plan- LRMP (1989), Chapter 4, Section 2, p 4-75
[36] 33 U.S.C. § 1313
[37] *Pronsolino*, 291 F.3d at 1126; *see also Dombeck*, 172 F.3d at 1095 (livestock grazing is a nonpoint source of pollution); *Natural Res. Def. Council v. EPA*, 915 F.2d 1314, 1316 (9th Cir. 1990) (runoff of pesticides from farmlands is a nonpoint source)
[38] *Id*. § 1313(c)(2)(A)
[39] *Id*. § 1313(c)(1) & (3)

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on the CWA § 303(d) list.[40] For all waters placed on this list, states must develop total maximum daily loads ("TMDLs") of pollutants to bring water quality-limited water bodies back into compliance with applicable water quality standards.[41] States must calculate TMDLs regardless of the source of the pollution. *See Pronsolino*, 291 F.3d at 1137. State water quality standards under § 303 apply—and the implementation of TMDLs under that section is required—even when water pollution comes solely from nonpoint sources.[42] Section 303 thus establishes a mechanism by which states can regulate nonpoint sources and ensure that nonpoint source pollution complies with state water quality standards set under that section. Section 401 preserves the state's authority to apply those standards to federally permitted activities.

The Forest Service reports that within the project area there are several streams on the Department of Environmental Quality's 2022 section 303(d) List of "Water Quality Limited Waterbodies" (EA at 129). The EA states that [w]ithin the project area there are four streams with assessed water quality impairments related to summer water temperature. These include North Fork Crooked River (7.8 miles), Fox Canyon Creek (5.2 miles), Roba Creek (3.6 miles), and Dry Paulina Creek (3.2 miles). In almost every one of these streams or stream segments, livestock grazing and timber harvest and related infrastructure are contributing significantly to water quality problems.

Given the current state of water quality in the project area, the Forest Service must address livestock grazing and current practices for timber harvesting—including roads and temporary roads. The evidence linking these management activities to riparian degradation and water quality problems is overwhelming and conclusive. This Project provides an opportunity to immediately remove roads and livestock from key stream reaches in order to protect water quality and riparian values. To that end, the Project should include specific actions to achieve water quality standards as rapidly as possible.

VIII. Travel Management

a. Road Density

To identify an appropriate road density throughout the forest and the Project area, the district must fully scrutinize the Project's roadwork component in accordance with the Travel Management Rule.[43] Specifically, the agency must demonstrate how the Project's roadwork components are consistent with the 2015 Ochoco Travel Analysis Report and the identification of the "minimum road system.[44] There are additional requirements for road densities for Ochoco Forest Plan Standard and Guidelines, for 4-224 to maintain the lowest density road system possible, and MA-F20 Winter range and MA-F21 General Forest Winter Range, which are: "Road and trail use will be limited to one mile of open access per section from December 1 to

[40] 33 U.S.C. § 1313(d)
[41] 40 C.F.R. § 130.7
[42] *Id*. at 1140–41
[43] 36 C.F.R. part 212, and Executive Orders 11644, 11989
[44] *Ochoco National Forest & Crooked River National Grassland Forest-wide Travel Analysis Report*, USDA Forest Service 2015; *Travel Management FEIS and ROD*, USDA Forest Service, 2015

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May 1; a greater density of trail and road access will be available during the remainder of the year, up to three miles per section."[45] Here, we are concerned the Forest Service has not complied with all travel management regulations, policy and law.

To address road system alignment with the travel management plan, the Forest Service has done important and meaningful work to identify 9.39 miles of road for decommissioning. However, LandWatch has significant concerns about whether these roads will actually be decommissioned, given the limited road maintenance budget of the Ochoco National Forest (see further discussion below).

Missing from the Forest Service's approach, though, is a true accounting of all functionally open roads as part of a road density analysis. To ensure compliance with the Ochoco Travel Management Plan and Winter Range road density standards and guidelines, the Forest Service must include the milage of functionally open roads, of all maintenance levels and all user created roads, in order to accurately account for road density in the Project area.

This is also necessary to comply with NEPA's "hard look" mandate, as the agency must maintain inventories or otherwise collect and disclose information about the resources it manages.[46] This is done so an adequate baseline exists to evaluate the environmental impacts of a proposed action.[47]

Here, that means accounting for the true density of the functional road network to provide accurate baseline data, in order to properly analyze how the Project alternatives will impact the road system, and therefore impact wildlife habitat and compliance with regulations, standards, and guidelines. Further, in the Project's Core Habitat Analysis (Wildlife Appendix C), the EA describes a more comprehensive approach to assessing the impacts of the road system:

> To quantify the existing condition, all roads and trails that lie within the project area were surveyed and roads were subsequently broken into two categories: 1) open on ground, and 2) physically closed. Roads labeled as 'open on ground' were not defined by their maintenance level as in other analyses (e.g., open road density analysis), but were instead defined by whether it was reasonable to assume that the road was receiving any use.

(EA's Wildlife Appendix C at 1). The EA's Elk Security Analysis describes a similar method, where "motorized routes were defined as any road or motorized trail receiving use by the public regardless of maintenance level or if it was a system road or user-created route" (EA's Wildlife Appendix E at 1). Including all functionally open roads for the elk security analysis and not the

[45] Ochoco Forest Plan- LRMP (1989), Chapter 4, Section 2- MA-F20 Winter Range, 4-83, MA-F21 General Forest Winter Range, 4-85, Section 3, 4-224
[46] *See Neighbors of Cuddy Mtn. v. U.S. Forest Serv.*, 137 F.3d 1372, 1379–80 (9th Cir. 1998).
[47] *Id.*

road density analysis is arbitrary and capricious, and appears to ignore the best available data, represented in the Elk Security and Wildlife Core Area analyses.[48]

The Great Old Broads for the Wilderness, Bitterbrush Chapter, in partnership with LandWatch and others conservation interests, conducted road surveys across the Ochoco National Forest, including within the Black Mountain Vegetation Management Project area, a 34,013-acre area project adjacent to the proposed North Fork Crooked River project. ML 1 closed and decommissioned roads were surveyed in the Black Mountain Project area during the summer and early fall of 2020 to assess how many of the closed or decommissioned roads in the area were physically closed or had a barrier, and if they had been driven that year (the road survey can be found in Appendix B of LandWatch's comment). Out of 115 closed, decommissioned and user-created roads in the Black Mountain Vegetation Project area the surveys identified 63 closed, decommissioned or user-created roads that were open, most with no barrier, and extensively used by the public. Given the close proximity of the Black Mountain Project road surveys to the North Fork Crooked River project area, it is assumed similar issues are present within the Project area.

The use of an accurate road density analysis that includes all functionally open roads is critical for determining the Project's true environmental impacts, and for compliance with the Ochoco Forest Plan winter range and transportation standards and guidelines, and Travel Management Rule.

Further, the Forest Service needs to include an adequate plan for physically closing all ML-1, decommissioned, and user created roads, as this has clearly not been accomplished in past projects. The plan must demonstrate reasonably complete mitigation measures by including an assessment of how effective mitigation can be—due to the current use of "closed" roads, there is no assumption that simply stating the roads will be closed, and using the same unsuccessful closure techniques from past projects, will actually lead to roads that stay closed.[49] In an EIS, the Forest Service must include an assessment and discussion of how the roads will be closed, which needs to include plans for monitoring and enforcement.

b. Timeline for Road Closures and Decommissioning

The Draft EA states that "[i]n recent years, the road maintenance budget for the Ochoco NF has only allowed for routine maintenance on maintenance level 3-5 roads…Due to limited road maintenance funds, and the adverse effects to other resources as a result of reduced maintenance, current conditions do not meet desired conditions" (EA at167). In other words, the limited budget for addressing road related issues does not allow the Forest Service to follow through on its obligations, including to close and decommission roads.

This is particularly concerning related to the Project's proposal to decommission 9.39 miles of roads. As the EA describes, "[t] he decommissioning work mentioned in the above list would be

[48] 5 U.S.C. § 706(2)(A), (D); 36 C.F.R. § 219.3 (Under NFMA, the Forest Service has an obligation to utilize the "best available science")
[49] *S. Fork Band Council of W. Shoshone v. U.S DOI*, 588 F.3d 718, 727 (9th Cir. 2009)

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completed gradually as funds become available" (EA at 168). Here, the Forest cannot even do basic road maintenance, so why would it be assumed in the analysis that without dedicated funds that the proposed work to decommission roads will ever happen? Given this, it is not reasonable to assume that any positive benefits described in the analysis from decommissioning roads will be realized on the landscape, unless the Forest Service can demonstrate how the work will be funded.

The same is true for closing roads that are currently open. The Draft EA states that "Alternatives 2 and 3 would close 6.15 miles of currently open maintenance level 2 road" (EA at 168), but that this work "would be completed gradually as funds become available" (EA at 169).

The Forest Service must commit to a clear timeline for closing and decommissioning roads within the project area and identify specific funding sources to complete this important work. Otherwise, the EA makes clear that this work will not be completed, leaving the EA's analysis flawed where expected benefits to resource values would come from closing and decommissioning roads.

c. Close and Decommission more Roads

There is no difference between the proposed changes to maintenance levels under Alternative 2 and 3 in the Draft EA. As drafted, the EA proposes to:

- Decommission 9.6 miles of roads
- Close 6.15 miles of ML 2 roads
- Upgrade 34.49 miles of ML 1 roads to Administrative ML 2
- Change 28.25 miles of ML 2 roads to administrative ML 2 roads
- Upgrade .33 miles of ML 1 road to ML 2

Overall there is a net gain in roads open to motorized travel within the project area of an alarming 28.67 miles. Further, many roads are proposed for maintenance and reconstruction. The EA states that:

> Under Alternative 2, approximately 122.93 miles of road would receive road maintenance and 21.69 miles of road would receive road reconstruction as part of commercial Timber Sales. Under Alternative 3, approximately 109.81 miles of road would receive road maintenance and 19.38 miles of road would receive road reconstruction as part of commercial timber harvest.

(EA at 172). The proposed miles of road reconstruction under both action alternatives are double the miles of proposed road decommissioning and are guaranteed to happen as part of project implementation, whereas road decommission will only occur "as funds become available."

Further, many temporary roads would be opened or created under both action alternatives. For instance, "[a]pproximately 27.07 miles of maintenance level 1 road in Alternative 2 and 20.23

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miles of maintenance level 1 road in Alternative 3 will be temporarily opened to administrative traffic during commercial Timber Sales" (EA at 173); and "[u]nder Alternative 2, 22.89 miles of temporary road would be constructed" and "Under Alternative 3, 24.23 miles of temporary road would be constructed" (EA at 174).

The net increase in open motorized roads, combined with the large amount of road maintenance, reconstruction, and temporary roads, leads to a substantial increase in the number of roads open to motorized traffic, and an overall increase in the impacts from roads within the Project area. As discussed in the Draft EA and elsewhere in these comments, the impacts of roads on sensitive resource values, including riparian areas, is well established in the scientific literature.

While the EA asserts that the proposed action alternatives decrease the overall open road *density* across the project area, the increase in motorized traffic will still have detrimental impacts to sensitive resource values, including wildlife and water quality. This coupled with the stated fact that the Forest Service does not have adequate funding to decommission or close the roads identified in the EA, the negative impacts from road development within the project area is grossly understated in the EA.

The Forest Service must close and decommission more roads to reduce impacts to sensitive resources, including riparian areas and security habitat, and to meet the projects stated purpose and need.

IX. Special Elk Habitat

All alternatives presented in the Draft EA fail to properly locate and analyze the Project's special elk habitat, such as habitat needed for rutting, wallowing and calving. This in part, has led to a failure to properly assess the negative impacts of the Project on these special habitats.

The elk numbers in the Project area are below Oregon Department of Fish and Wildlife's ("ODFW") set management levels. Given this, the proposed alternatives should be designed to help restore elk habitat and increase elk population numbers. As stated in the Draft EA, managing healthy, stable elk populations is a cooperative effort between the Forest Service and ODFW, with the Forest Service responsible for the management of habitat, and with explicit direction in the Ochoco Forest Plan for the District to "manage elk and deer habitat to meet the population objectives of the ODFW to the extent practicable" (EA at 69). As the Forest Service is tasked with protecting habitat for elk and for meeting or maintaining population objectives set by ODFW to the extent practicable, there is even more onus on the Forest Service to pick a project alternative that best supports rutting, wallowing, calving, connectivity corridors, and other important elk habitat, as elk numbers are already below the level deemed appropriate by ODFW. Merriam-Webster defines "Practicable" as "capable of being put into practice or of being done or accomplished : Feasible."[50] Presenting an alternative that adequately locates and protects special elk habitat like calving and rutting locations is feasible, and is a way for the

[50] Practicable Definition & Meaning - Merriam-Webster

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Forest Service to uphold its duty to meet ODFW management objectives for elk, per the Ochoco Forest Plan.

Additionally, the Draft EA fails to provide specific information about the current locations and distributions of elk calving, wallowing, and rutting sites within the Project area. Without this information the Draft EA has inadequate baseline data, and the imprecise information, paired with inadequate project RPMs, makes it impossible to show the Project's compliance with Ochoco Forest Plan Standards and Guidelines for Rocky Mountain Elk, which requires the Forest Service to: "Protect the character of elk calving sites. Minimize disturbance from human activity during calving season (approximately May 15 to June 30). Also protect wallows during rutting season (September 1 to October 15)."[51] As stated in a previous case on this same issue: "[W]ithout data identifying the location of calving sites and wallows, the Forest Service cannot meet its obligation to protect those sites or minimize disturbance to them."[52] Here, the Draft EA as prepared cannot meet its obligation to protect or minimize disturbance to elk calving and wallowing habitat, and therefore cannot comply with the Ochoco Forest Plan.

For calving, the EA states:

> Calving and fawning primarily occur in proximity to riparian areas that provide access to high quality forage, water, and cover…Identification of specific calving sites is infeasible…There is currently no peer-reviewed literature describing calving and fawning habitat that is specific enough for GIS analysis.

(EA at 69). The EA instead approximates "areas within the project area that have the highest likelihood of providing habitat features important to calving elk" (EA at 69).

Additionally, the Draft EA does not provide specific information on wallows, stating:

> Wallows primarily occur near water in proximity to riparian areas or other moist, soft ground. Numerous areas that potentially support wallows have been identified across the project area such as springs, seeps, bogs, and other wet areas. Much like calving areas, however, use of individual wallow sites may change from year to year based on seasonal fluctuations in forage or availability of water.

(EA at 70). Like with calving, the Draft EA approximates where wallows will be, stating "[w]hile these areas may have suitable habitat components, they are not necessarily utilized by elk for wallowing. However, these locations represent the best-known estimate of areas within the North Fork Crooked River project that contain important habitat attributes to wallowing elk" (EA at 70).

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[51] Ochoco Forest Plan- LRMP (1989), Chapter 4, Section 3- Rocky Mountain Elk and Mule Deer 4-246: Protect wallows during rutting season, September 1 to October 15, Protect the character of elk calving sites; Minimize disturbance from human activity during calving season, May 15 to June 30

[52] *WildEarth Guardians v. Jeffries* ("*Guardians*"), 370 F. Supp. 3d 1208 (D. Or. 2018); *see also id.* at 1221.

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This general analysis of calving, rutting, and wallowing habitat—which omits precise locations, their quality, and where locations may exist in relation to Project treatments—violates NEPA's requirements that the agency take a "hard look" at the Project's environmental impacts, and to guarantee that the public receives accurate information about those impacts.[53] This results in an inadequate baseline and prevents the Forest Service from disclosing and analyzing the Project's direct, indirect, and cumulative impacts.[54]

Further, the Project's proposed RPMs do not go far enough to protect elk special habitat as directed by the Forest Plan.[55] The RPMs do not adequately protect calving and rutting sites during the respective seasons. For calving, one RPM "restricts" but does not prohibit project activities within calving season, and the restricted project activities only apply "within 0.25 miles of identified elk calving areas," and can be waived "with approval of District Ranger, in a particular year if surveys determine calving elk are not present" (Draft EA Appendix B at 246). However, as we discuss above, no known calving areas have been "identified;" instead the Forest Service has only identified habitat features likely to support elk calving. Overall, the Draft EA's conditional RPMs, untethered from specific locations within the project area, fails to comply with the Ochoco Forest Plan Standards and Guidelines for Rocky Mountain Elk.[56]

Further, the Draft EA inadequately analyzes how current cattle allotments impact special elk habitats, including at specific locations for calving and rutting in the Project area. The project area overlaps with seven grazing allotments, and the EA states that "livestock grazing may be present within portions of the project during rutting season and may impact use of the project area by elk, thus reducing the utility of some wallows" (EA at 74). For calving season, the Draft EA similarly concedes:

> The use of high-quality calving and fawning habitat may also be impacted by the presence of livestock within the project area as livestock may be present during calving season and social avoidance of livestock by big game is well documented. These factors would further reduce the total amount of available high quality, undisturbed, and/or secure parturition habitat within the project area.

(EA at 69). The EA should conduct a specific analysis on when and where cattle allotments interact with specific elk calving and rutting sites, as this has a direct impact on elks' ability to effectively use this habitat, and the specifics on how elk are impacted by the Project alternatives. Not accounting for the impacts of grazing on resources in the

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[53] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1083 (9th Cir. 2011); *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998); 40 C.F.R. § 1500.1(b).
[54] *Guardians*, 370 F. Supp. 3d at 1240 (citing Klamath Siskiyou Wildlands Ctr. v. U.S. BLM, 387 F.3d 989, 994–96 (9th Cir. 2004)); see also 40 C.F.R. § 1502.22, 40 CFR 1508.7 "Cumulative impact"
[55] Ochoco Forest Plan- LRMP (1989), Chapter 4, Section 3- Rocky Mountain Elk and Mule Deer 4-246: Protect wallows during rutting season, September 1 to October 15Protect the character of elk calving sites; Minimize disturbance from human activity during calving season, May 15 to June 30
[56] Ochoco Forest Plan- LRMP (1989), Chapter 4, Section 3- Rocky Mountain Elk and Mule Deer 4-246: Protect wallows during rutting season, September 1 to October 15Protect the character of elk calving sites; Minimize disturbance from human activity during calving season, May 15 to June 30

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Project area runs afoul of NEPA's requirement to analyze the cumulative impacts of the agency's actions in the Project area, and on elk special habitat. To meet the "hard look" standards, in an EIS, the Forest Service must provide some quantified or detailed information on the impacts of grazing in this project area on special elk habitats.[57]

The Forest Service should also include a timeline of when roads and temporary roads will be closed and decommissioned, and how the conclusions of the EA's habitat analysis are impacted based on the rollout of these actions. Elk security is only improved if the project area has an adequate plan for physically closing the functionally open roads, which includes providing the timing, funding, and plans to monitor and enforce closures.[58] As discussed in the Travel Management section of this comment, the Ochoco National Forest has a concerning history of failing to monitor and enforce closures from past projects, and the lack of funding currently available for road maintenance on the Ochoco National Forest only adds to the alarm. In an EIS, the Forest Service must include specific plans on timing of closures and decommissioning, and plans for monitoring and enforcing closures, to ensure an accurate elk security analysis has been conducted for the Project.

The Draft EA also uses inadequate data for an elk habitat analysis. As acknowledged in the Draft EA, the HEI methodology is outdated and does not use the last 20 years of best available science (EA at 45). Further, it is unclear based on the data in the Draft EA how the HEI numbers were derived. For example, with so many treatments and decreases in canopy cover, it's unclear to LandWatch how the HEI improves with Project implementation. The agency must "explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable."[59] LandWatch asks that in an EIS, the Forest Service provide the data, and the reasons it believes this data is reliable, that supports such high HEIs (for example, if road density reduction is the stated reason for HEI improvement, LandWatch asks that this data be included, with an explanation of its reliability).

X. Impacts to Wildlife Habitat

a. Redband

Redband Trout are a Region 6 sensitive species and inhabit all four subwatershes within the project area (EA at 127, 138). As the EA states "[h]istorically, Redband trout may have occupied more aquatic habitat within the NFCR project area than presently. Road densities, livestock grazing, timber harvest, and mining have contributed to a reduction in suitable habitat and increased fish passage barriers" (EA at 128). Here, the proposed project has the opportunity to meaningfully address management issues related to road densities, timber harvest, and livestock grazing, and to chart a long-term restorative path for Redband habitat within the project area.

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[57] *Cuddy Mtn.,* 137 F.3d at 138*; Or. Nat. Res. Council Fund v. Brong*, 492 F.3d 1120, 1134–35 (9th Cir. 2007*); Klamath-Siskiyou Wildlands Ctr. v. U.S. BLM*, 387 F.3d 989, 993–94 (9th Cir. 2004); *Kern v. U.S. BLM*, 284 F.3d 1062, 1075–79 (9th Cir. 2002); 40 CFR 1508.7 "Cumulative impact" (Jan. 3, 2017)

[58] *See, e.g.*, *S. Fork Band Council of W. Shoshone v. U.S DOI*, 588 F.3d 718, 727 (9th Cir. 2009)

[59] *Earth Island Inst. v. Carlton*, 626 F.3d 462, 470 (9th Cir. 2010)

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Instead, the Project as proposed fails to meaningfully address these issues and proposes more roads, commercial timber harvesting in RHCAs, and no actions to address the widespread impacts from livestock grazing.

The EA states that for Redband trout, "[t]he state standards (340-041-0028, approved by EPA Mar 2004) identify the seven-day-average maximum temperature of streams listed as having salmon and trout rearing and migration should not exceed 18.0ºC (64.4ºF)" (EA at 142). Yet, as discussed elsewhere in these comments, the state standards are currently not being met within the project area (See also discussion in EA at 142). Particularly concerning here is the Forest Service's proposal to remove conifers in streams where INFISH RMOs for shade and temperature are not being met, while failing to address impacts from livestock grazing, entrenchment and disconnected floodplains, and an extensive road network. With stream temperatures already failing to meet standards for Redband, the project as proposed will only further stress the Redband populations within the project area by removing shade and failing to address drivers of widespread habitat degradation.

Further, the project proposes to increase the miles of roads open to motorized vehicles within the project area. Many authors have reported on the increased sediment load from roads connected to streams, causing increased aggradation of stream beds, filling of pools, enlarged channel widths and widening width-to-depth ratios (Jackson and Beschta 1984, Lisle 1982). As road density increases, there is a clear decline in pool frequency and frequency of large pools, both of which are essential requirements for high-quality fish habitat. Lee et al. (1997) reported that increasing road densities are correlated with declines in the four non-anadromous salmonid species including bull trout, Westslope cutthroat trout, Yellowstone cutthroat trout, and redband trout. As pools are filled in by sediment, they support fewer fish, fish suffer higher mortality, reduce salmonid embryo survival (Bjornn and Reiser 1991; Jensen et al. 2009) and cause decreased fry emergence and juvenile densities, loss of winter carrying capacity, and increased predation (Chapman 1988; Everest et al. 1987; Scrivener and Brownlee 1989; Magee et al. 1996; Weaver and Fraley 1993; Young et al. 1991). High fine sediment load reduces intragravel dissolved oxygen, increases metabolic waste concentrations, decreases intergravel space for aquatic life, and restricts movements of alevins (young fry) (Bjornn and Reiser 1991; Chapman 1988; Everest et al. 1987; Baird et al. 2012). As the EA concedes, "[e]levated background levels of fine sediment are of concern for the negative effects on aquatic biota and in the project area particularly, Redband trout" (EA at 150).

Like the removal of shade, an increase in roads and associated sediment loads also impacts stream temperatures important for Reband trout. Stuart et al. (2007) reported that many streams on the Ochoco National Forest had high temperatures. Their results indicate that redband trout are highly susceptible to increasing water temperatures. Figure 1 below (from Stuart et al. 2007, Figure 7) demonstrates the swift decline in Redband trout abundance as stream temperatures increase, one of the parameters for Redband survival and persistence.

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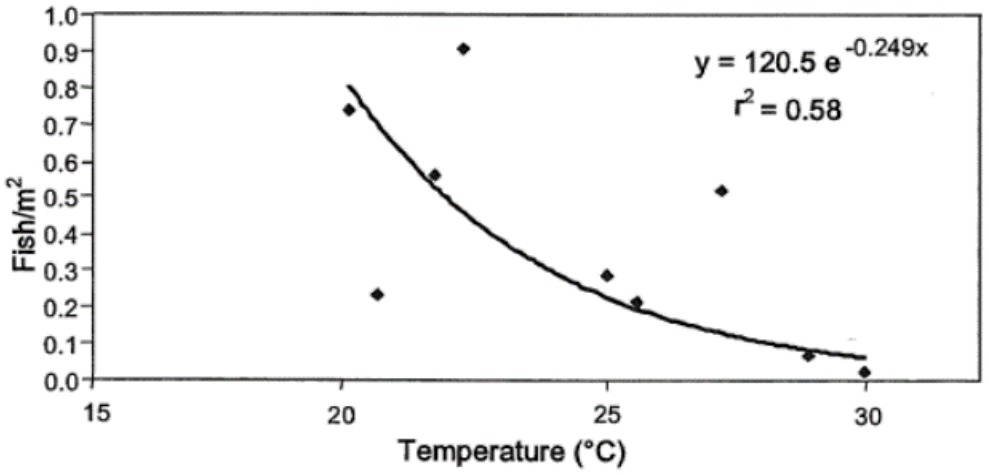

FIGURE 7.—Relationship between density (fish/m^2) of redband trout (all age classes) and maximum water temperatures (°C) in small streams of the Crooked River basin, 1994–1995.

Figure 1. The relative abundance of Redband trout declines as stream temperatures increase (from Stuart et al. 2007).

The EA states:

> These treatments initially may result in a small increase in sediment delivered to the stream network but vegetative recovery following treatment may proceed more quickly and vigorously and prolong the sediment filtering effect over decades and thus help decrease sediment delivery (Luce et al. 2012) along established BMPs and PDCs.

(EA at 151). As discussed elsewhere, "vegetative recovery" is unlikely to proceed more quickly at scale following treatment due to the proposed projects failure to address impacts to riparian areas related livestock grazing, disconnected floodplains, and the extensive road network. Given this assumptions importance to the EA's analysis of the impacts of sediment, LandWatch questions whether the sediment delivery will be a "small increase" and of only short duration.

In areas of the Ochoco National Forest that have low levels of management, including less or no roads, less timber harvest, and less livestock grazing, streams are in relatively good condition and support good populations of Redband trout (Dambacher and Jones 2007, Stuart et al. 2007). For example, populations in areas with low road densities and limited grazing, such as upper reaches of Brush Creek in the Lookout Mountain roadless area, portions of the Mill Creek Wilderness, and in the roadless area along Rock Creek, habitat and fish populations are in reasonably good conditions. Further, within the Project area the only sub-watershed that is currently recognized by the Forest Service as properly functioning is where livestock grazing

was removed in 2005 (See discussion in EA of Rough Canyon Creek subwatershed at 134). In other words, timber harvest removes streamside shade, and increases sediment delivery and water temperature, which can become chronic or acutely lethal to native fish species especially cold-water salmonids.

Because of the proposed projects likelihood of impacting Redband trout habitat, the Forest Service should adopt an alternative that meaningfully address the issues discussed above, and close more roads, removes commercial timber harvesting in RHCAs, and address the widespread impacts from livestock grazing on riparian areas and streams.

b. Mule Deer

As explained in the above section on Special Elk Habitat, managing healthy, stable mule deer populations is a cooperative effort between the Forest Service and ODFW, with the Forest Service responsible for the management of habitat, and with explicit direction in the Ochoco Forest Plan to "manage elk and deer habitat to meet the population objectives of the ODFW to the extent practicable" (EA at 69). While improving mule deer habitat is not a stated project purpose and need, managing habitat for mule deer to meet ODFW's management objectives to the extent practicable is a FS obligation under the Ochoco Foret Plan. The scale of this project, in winter range and in connectivity corridors, seems to be in opposition to this commitment to improve mule deer habitat to support population numbers to the extent practicable.

The Project's proposed treatments in Witner Range MA-F20 seem directly at odds with the emphasis and desired conditions of winter range in the Ochoco Forest Plan; the Forest Service should modify treatments to reflect a reduction in treatments in winter range. Further, the Draft EA fails to provide an explanation and analysis of how winter range is protected December 1 to May 1, and how livestock grazing is managed in winter range to protect big game needs. Adding to this concern, the EA states that all action alternatives would result in a decrease in hiding cover. In an EIS, the Forest Service should drop commercial logging units in big game winter range, should make explicit that no treatments, and especially commercial/ mechanized logging, will occur December 1 to May 1, and should explicitly identify and provide adequate leave patches for mule deer in all seasonal and migratory habitats.

XI. Sensitive Species

The EA states that:

> Peck's mariposa lily (*Calochortus longebarbatus* var. *peckii*) is a Regional Forester's Sensitive Species (RFSS) and listed on ORBIC List 1 as threatened with extinction throughout its range at the state level. Peck's mariposa lily is an endemic species with a global distribution restricted to Central Oregon. There are twenty populations of Peck's mariposa lily occupying 425 acres within the NFCR project area.

(EA at 96). Yet, the EA proposes both commercial and non-commercial treatments within known Peck's mariposa lily populations. Under the RPMs, the EA states that "No ground-based

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equipment would be used within 50 feet of known sensitive plant populations during thinning activities. This RPM does not apply to units with a site-specific CALOP prescription" (EA at 232). In addition, the EA concludes that "stream buffers in commercial thinning units would protect Peck's mariposa lily plants and suitable habitat from the impacts of ground-based equipment" (EA at 98). However, it's hard to understand how these protective measures will be implemented given the extensive treatments proposed within the 425 acres of occupied habitat.

For example, alternative 2 proposes to commercially treat 13% of all known populations; alternative 3 proposes to commercially treat 6% of all known populations. Additionally, alternative 2 proposes to non-commercially treat 28% of all know populations; and alternative 3 proposes to non-commercially treat 73.8% of all know populations. In other words, the two action alternatives propose to treat anywhere from 28% to 73.8% of the known populations (or more depending on the degree of overlap between commercial and non-commercial treatments). It's unclear how the proposed buffers will eliminate impacts to these populations when such extensive disturbance is proposed.

Further, while the EA claims that road closures and decommissioning will ultimately benefit Peck's mariposa lily—actions which are not funded and have no proposed timeline for implementation—the EA also opens previously closed roads to motorized travel that bisect Peck's mariposa lily populations (EA at 100). Similarly, proposed temporary roads are described as bisecting populations, and the EA states that "some disturbance in occupied Peck's mariposa lily habitat" will occur from the construction of temporary roads.

To protect these sensitive plant populations, the Forst Service should close and decommission more roads, provide funding and timelines for road closures and decommissioning, and not open up new roads to motorized travel or construct temporary roads that travel past or bisect Peck's mariposa lily populations. As the EA makes clear, roads pose a significant threat to the remaining plant populations through sedimentation, changes in hydrology, compaction and impacts to infiltration rates, and by substantially increasing the risk of invasive plant species spread (EA at 100).

Further, the Forest should remove all commercial and ground-based mechanical treatments from the 425 acres of known Peck's mariposa lily populations. Non-commercial treatments should be scaled back and conducted by hand to reduce impacts from sedimentation, compaction, and the risk of spreading invasive species.

XII. Connectivity Corridors

a. 1995 Eastside Screens

The EA states that "[c]onnectivity corridors were delineated for the North Fork Crooked River project based on specific direction from the Eastside Screens pertaining to the establishment and management of connectivity corridors" (EA at 87). However, no information about where connectivity corridors were identified, how many were identified, or how large current connectivity corridors are, is provided in the EA. The omission of this information leaves the public in the dark about the baseline data related to these critical wildlife habitat features and whether the project conforms to the 1995 Eastside Screens standards.

The 1995 Eastside Screens state that "(4) Harvesting within connectivity corridors is permitted if all the criteria in (2) above can be met, and if some amount of understory (if any occurs) is left in patches or scattered to assist in supporting stand density and cover."[60] Criteria (2) provides a description of stand characteristics within connectivity corridors, describing "[s]tands in which medium diameter or larger trees are common, and canopy closures are within the top one-third of site potential. Stand widths should be at least 400 ft. wide at their narrowest point.[61]

The EA describes that:

> Prescriptions in the connective corridors would be modified to retain density in the upper half of the management zone (63% or more of site potential). This level of density, in addition to retained understory, would maintain canopy closure in the top one third of site potential and meet the Interim Wildlife Standard.

(EA at 87). Yet, no information about the current conditions within connectivity corridors, or how proposed prescriptions would be modified is provided in the EA.

The EA goes on to state that:

> Connectivity corridors were delineated to connect LOS habitat within the project area and to LOS habitat outside the project area according to the Eastside Screens direction. Although canopy cover would be reduced for all action alternatives because of thinning activities, unit prescriptions would maintain canopy closure in the top one third of site potential and meet the Interim Wildlife Standard.

(EA at 88). Here, the EA provides no maps of where LOS is located within the project area, or where the identified corridors that connect LOS are located. Further, no information is provided about the current canopy cover within corridors, what the identified "site potential" of each corridor is, what level of thinning is proposed (or allowed) within each corridor, or what measures will be taken to ensure these key wildlife habitat features are protected and managed in accordance with the 1995 Eastside Screens.

The EA states that "Resource Protection Measures exist for commercial and noncommercial thinning treatments and would leave portions of units in un-thinned patches…These Resource Protection Measures are *designed to maintain the dense nature of the understory forest structure, which is a critical component for numerous LOS-dependent wildlife species*" (EA at 87) (emphasis added). Yet, the RPMs described in Appendix B of the Draft EA provide very little additional guidance related to connectivity corridors. In fact, there is only one RPM that explicitly mentions connectivity corridors, which states that "[b]urning within goshawk post-

[60] Ochoco National Forest Land and Resource Management Plan (1989), as amended by the 1995 Decision Notice for the Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (i.e. 1995 Eastside Screens), Appendix B p11.
[61] Ochoco National Forest Land and Resource Management Plan (1989), as amended by the 1995 Decision Notice for the Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (i.e. 1995 Eastside Screens), Appendix B p10.

fledging areas and connective corridors would be designed to minimize loss of mid and overstory cover, snags, and large down wood" (EA at 145). While this RPM may assist managers in implementing prescribed burning in goshawk habitat, it is silent on how to minimize impacts related to other proposed treatments, including logging across broader connectivity corridors.

One additional RPM does appear to relate to connectivity corridors. It states that for "select commercial and non-commercial harvest units" the Forest Service should "retain patches of cover and provide for diversity of wildlife habitats in a mosaic pattern within treated units" by "[l]eave[ing] a portion of treatment area in un-thinned patches, except where desired conditions are in direct conflict" (EA at 246). Yet, no site-specific information is provided, including for example which "select harvest units" this would apply to, or how many or how big un-thinned patches should be.

The EA's general analysis of connectivity corridors—which omits precise locations, current condition, and where Project treatments would be in relation to corridors—violates NEPA's requirements that the agency take a "hard look" at the Project's environmental impacts, and to guarantee that the public receives accurate information about those impacts.[62] This results in inadequate baseline data and prevents the Forest Service from disclosing and analyzing the Project's direct, indirect, and cumulative impacts.[63]

b. Adequate Leave Patches

As discussed above, the RPMs provide the public with little information about how the project will meaningfully protect wildlife. The Forest Service must provide more information on the location and size of leave patches, including how leave patches correspond to the different habitat needs of the many species impacted in the Project area, and how the leave patches support wildlife during the various implementation stages of the Project.

Further, the Project is largely silent on the action alternatives' impacts to any wildlife connectivity corridors outside of impacts to the Northern goshawk, which has specific connectivity requirements described in the Wildlife Standard of the Regional Forester's Forest Plan Amendment #2 (Eastside Screens). In an EIS, the Forest Service must address other connectivity corridors in the Project area, and how the proposed actions might impact these corridors. For example, the EIS should analyze impacts to known big game migration corridors between summer and winter range in the Project area. The Forest Service should incorporate this information for all relevant species analyzed in an EIS.

[62] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1083 (9th Cir. 2011); *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998); 40 C.F.R. § 1500.1(b).
[63] *Guardians*, 370 F. Supp. 3d at 1240 (citing Klamath Siskiyou Wildlands Ctr. v. U.S. BLM, 387 F.3d 989, 994–96 (9th Cir. 2004)); see also 40 C.F.R. § 1502.22, 40 CFR 1508.7 "Cumulative impact"

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c. Priority Wildlife Connectivity Areas

The Forest Service should consider how to preserve and restore habitats within ODFW identified Priority Wildlife Connectivity Areas ("PWCAs"). PWCAs are "an interconnected network representing the parts of the landscape with the highest overall value for facilitating wildlife movement in Oregon."[64] As stated on the ODFW's Oregon Conservation Strategy website, PWCAs can help inform on-the-ground conservation action and planning, including the identification of restoration priorities, and informing land management decisions related to wildlife habitat on federally managed lands.[65] The Forest Service should incorporate PWCAs into the analysis to help prioritize the management of wildlife habitat to facilitate seasonal movements and species' adaptation to climate change.

XIII. Adequately Accounting for Impacts on Carbon Release and Climate Change

The Project fails to adequately address the Project's carbon emissions impacts—a general explanation of the Project's emissions does not satisfy NEPA's hard look standard.[66] In an EIS, the Forest Service must specifically address significance at the local scale; the courts have consistently held that the failure to address significance in the proper context is a violation of NEPA.[67] Per NEPA, the Forest Service must also present more than a statement of platitudes—the public must be able to see and understand the actual impacts of an individual project.[68] Specifically, the USFS is required to determine "the extent to which this particular project's [carbon emissions] will add to the severe impacts of climate change."[69]

The Project's analysis does not even consider greenhouse gas emissions, and in fact, the word emissions does not even show up in the EA. *CBD v. USFS* explicitly states: "USFS has the responsibility to give the public an accurate picture of what impacts a project may have, no matter how "infinitesimal" they believe they may be.[70] Here, the Draft EA has failed to provide that accurate picture. LandWatch asks that a site-specific scale of analysis of the Project's carbon emissions and their impacts are provided in an EIS.

Given part of the project purpose and need to is "promote adaptation to climate change," the omission of key information related to climate impacts of the proposed project are alarming and do not conform to President Biden's Executive Order 140721, Strengthening the Nation's Forests, Communities, and Local Economies, which outlines the important role our federally managed forests play in reaching net-zero greenhouse gas emissions.[71]

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[64] Priority Wildlife Connectivity Areas (PWCAs) – Oregon Conservation Strategy (last accessed on November 29, 2023)
[65] *Id.*
[66] *CBD v. USFS*, Case 9:22-cv-00114-DWM Filed 08/17/23 (D. Mont.)
[67] See, e.g., *Anderson v. Evans*, 371 F.3d 475, 492 (9th Cir. 2004).
[68] *CBD v. USFS,* Case 9:22-cv-00114-DWM Filed 08/17/23 (D. Mont.)
[69] *Id*., citing *Montana v. Haaland, 350 Mont., 50 F.4th at 1266*
[70] *CBD v. USFS*, Case 9:22-cv-00114-DWM Filed 08/17/23 (D. Mont.)
[71] Biden, J. 2022. Executive Order 140721 of April 22, 2022. Strengthening the Nation's Forests, Communities, and Local Economies.

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Several studies have found that the emissions from logging may in fact exceed the emissions that would occur if wildfire encountered the same Project area, as the amount of carbon removed is often much larger than that saved, and more area is harvested than would actually burn (Law et al. 2018; Law and Harmon 2011). Law et al. (2018) looked at all carbon emissions in 2001-2005, and again in 2011-2015, and found:

> …in 2001–2005, Oregon's net wood product emissions were 32.61 million tCO2e, and 3.7-fold wildfire emissions in the period that included the record fire year. In 2011–2015, net wood product emissions were 34.45 million tCO2e and almost 10-fold fire emissions, mostly due to lower fire emissions. The net wood product emissions are higher than fire emissions despite carbon benefits of storage in wood products and substitution for more fossil fuel-intensive products.

Berner et al (2017) found that tree mortality from fires and bark beetles "were both ~40% lower than earlier best-estimates reported by Hicke et al. (2013)." While fire was the leading cause of emissions in California, as stated above, carbon released from fire is eclipsed by logging in Oregon and Washington, where:

> Tree mortality from timber harvest was highest in Oregon and Washington and accounted for ~80% of [mortality, as defined] in these states… Recent tree mortality from timber harvest far exceeded tree mortality caused by both bark beetles and fires in the Pacific Northwest, highlighting that reductions in timber harvest could help these states meet GHG emission reduction targets.

(Berner et al 2017).

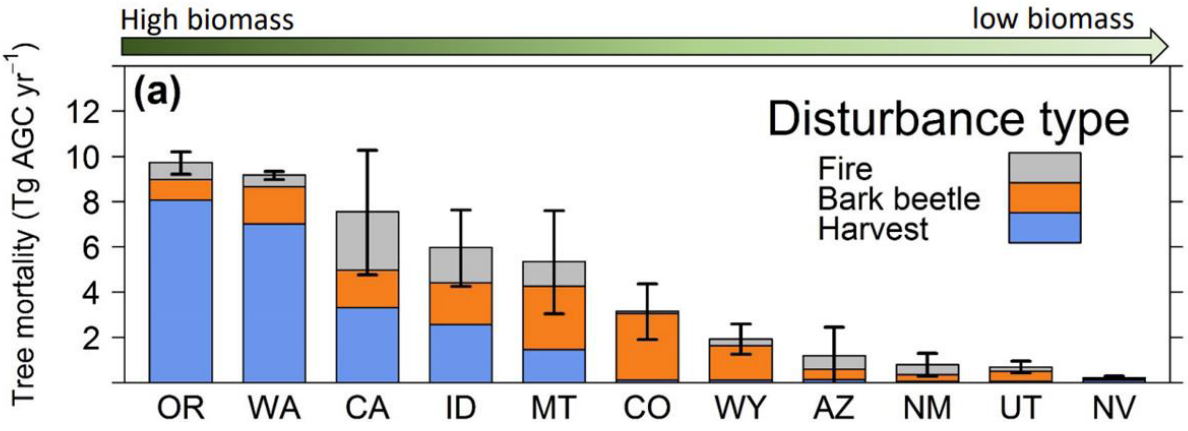

Figure 2. Mean annual tree mortality from fires, bark beetles, and timber harvest on forestland from 2003–2012 for each state in the western US. Tree mortality was quantified as the amount of aboveground carbon (AGC) stored in tree biomass killed by disturbance. (Berner et al. 2017)

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An even more recent study specifically compares carbon emission from fire as compared to the harvest of mature trees:

> We find that forest fire carbon emissions are on average only 6% of anthropogenic FFE over the past decade. While wildfire occurrence and area burned have increased over the last three decades, per area fire emissions for extreme fire events are relatively constant. In contrast, harvest of mature trees releases a higher density of carbon emissions (e.g., per unit area) relative to wildfire (150–800%) because harvest causes a higher rate of tree mortality than wildfire.

(Bartowitz et al 2022).

Further, the process of transferring carbon from live biomass to harvest wood products is a massively carbon intensive process. Carbon is lost at every stage—from the harvest itself, the manufacturing of products, the end of the products' use, and decay. Over the past 100 years of logging, 65% of the wood product carbon has returned to the atmosphere, and 16% has been transferred to landfills (Hudiburg et al 2019; Law et al. 2018). The most effective way to contribute to carbon sequestration is to preserve trees, not log them. In Eastside forests, 3% of large trees are storing 42% of the forest's above ground carbon (Mildrexler et al 2020)—the Final EIS should give a full accounting of its actual emissions for each alternative and note any large trees it removes as taking away from this carbon sink.

XIV. Wild and Scenic Rivers

Congress enacted the Wild and Scenic Rivers Act ("WSRA") in 1968 to identify rivers that possess "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" and to preserve those rivers in free-flowing condition and protect their immediate environments "for the benefit and enjoyment of present and future generations."[72] A river is eligible for designation and protection under the WSRA if it is a free-flowing stream and the adjacent land area possesses one or more of the "outstandingly remarkable values" ("ORVs") enumerated in § 1271.

Once a river corridor is designated, the federal agency charged with administration of that corridor must prepare a comprehensive river management plan "to provide for the protection of the river values"; to "address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes" of the Act; and to coordinate the river plan with land use planning.[73]

Every river included in the system, regardless of its classification as wild, scenic, or recreational, "shall be administered in such manner as to protect and enhance the values which caused it to be

[72] 16 U.S.C. § 1271
[73] *Id*. § 1274(d)(1).

included in said system."[74] "[P]rimary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features."[75] In addition to protection of a river's free-flowing condition and outstandingly remarkable values, the WSRA specifies that managing agencies must protect the water quality of all rivers added to the system.[76]

Within the Project area there are two segments of the North Fork Crooked River that are analyzed in the EA. As the EA states:

> The outstandingly remarkable values identified for Segments 3 and 4 of the North Fork are scenic values and botanical values (other similar values). Scenic values were determined to meet the criteria as an ORV because of the old growth ponderosa pine, larch, aspen, and willow, a ribbon of riparian vegetation along the river, open grassy meadows seasonally filled with wildflowers, and the rippling river. Botanical resources were determined to meet the criteria as an ORV because of the old growth ponderosa pine forests and sensitive plant species (e.g. Peck's mariposa lily) located near the river (USDA/USDI 1993).

(EA at 181). The 1993 Crooked River Wild and Scenic River ("WSR") Management Plan states that sensitive plant species, such as *Calochortus longebarbatus* var. *peckii* (Peck's mariposa lily), are found within segments 3 and 4.[77] However, the EA states that "[t]he botanical and silviculture treatment described in the EA would have no effect on the botanical values because it would not include old growth ponderosa pine and there are *no known populations of sensitive species* in these units" (EA at 182)(emphasis added). Here, we are concerned that the Forest Service has not complied with all relevant provisions of the WSR Management Plan. LandWatch asks the Forest Service to provide site-specific information about where treatments are proposed within the WSR corridor to help clarify how treatments relate to sensitive plant species, ORVs, and other significant values within the WSR corridor.

The WSR Management Plan provides standards and guidelines for Instream Resources and Riparian Habitat:

> The outstandingly remarkable botanical values within the river corridor will be protected and monitored. This includes the riparian vegetation in Segment 5, and populations of threatened, endangered, and sensitive plants including *Calochortus longebarbatus* var. *peckii* (Peck's mariposa lily) found throughout the river corridor.[78]

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[74] *Id*
[75] *Id*
[76] *Id*. §§ 1271, 1283(c).
[77] USDI. 1993. North Fork Crooked Wild and Scenic River Management Plan, Record of Decision and Finding of No Significant Impact. USDI Bureau of Land Management, Prineville District; USDA Forest Service, Ochoco National Forest. Prineville, Oregon.
[78] USDI. 1993. North Fork Crooked Wild and Scenic River Management Plan, Record of Decision and Finding of No Significant Impact. USDI Bureau of Land Management, Prineville District; USDA Forest Service, Ochoco National Forest. Prineville, Oregon.

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Here, the WSR Management Plan makes clear that sensitive plant species found throughout the river corridor will be protected and monitored. LandWatch asks that the Forest Service clarify what measures will be taken to protect and monitor sensitive plant species, such as Peck's mariposa lily within proposed non-commercial and commercial units.

Further, the EA makes clear that the WSR Management Plan only allows timber harvest, including thinning, under certain conditions:

> Each segment however shares the same desired conditions of "Protection and enhancement of riparian areas and water quality is emphasized," and "timber harvest such as thinning, deemed necessary to implement the vegetation management plan may occur if the objective is to maintain or enhance scenic, recreation or water quality values over the long term.

(EA at 181). Because of this, the Forest Service should not conduct any commercial harvest within the WSR corridor, and any proposed treatments should exclude mechanized equipment to reduce impacts to riparian areas and water quality.

XV. Conclusion

Thank you for the opportunity to comment on this project and please reach out if you have any questions or would like to discuss the comments in this letter. Please retain LandWatch on your list of interested public.

Sincerely,

Jeremy Austin
Wild Lands & Water Program Manager
Central Oregon LandWatch
2843 NW Lolo Dr St. 200
Bend, OR 97703

Cc:

Ben Gordon, Executive Director
Central Oregon LandWatch

Attachments (as stated)

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