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Philip Monsanto, District Ranger
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Mt. Hood National Forest
16400 Champion Way
Sandy, OR 97055

Via: <https://cara.fs2c.usda.gov/Public/CommentInput?Project=294998>

Subject: Anvil Vegetation Management Project Preliminary Assessment Comments

Dear District Ranger Monsanto,

Please accept the following comments from Oregon Wild and WildEarth Guardians (“Commenters”) concerning the Anvil Vegetation Management Project (“Project”) being planned in the Clackamas River Ranger District as described in the Anvil Vegetation Management Preliminary Assessment (“PA”), dated May 2026, and associated specialist reports. Oregon Wild represents 20,000 members and supporters who share the organization’s mission to protect and restore Oregon’s wildlands, wildlife, and water as an enduring legacy. Oregon Wild’s goal is to protect areas that remain intact while striving to restore areas that have been degraded. This can be accomplished by moving over-represented ecosystem elements (such as logged and roaded areas) toward characteristics that are currently under-represented (such as roadless areas and complex old forest). WildEarth Guardians is a nonprofit conservation organization with offices in Washington, Oregon, and five other states. Guardians has nearly 200,000 members and supporters across the United States and works to protect and restore wildlife, wild places, wild rivers, and the health of the American West. Guardians and its members have specific interests in the health and resilience of public lands and waterways, including Mt. Hood National Forest. Oregon Wild and WildEarth Guardians submitted scoping comments for the Project on October 31, 2025. Those scoping comments are incorporated by reference.

The purposes of the Project are to: improve forest health and vigor by reducing stand density; shift the structure and composition of forested stands towards desired conditions; reduce fuel loads along main roads to provide safer ingress and egress for firefighters, first responders, and the public; reduce the risk of high-intensity wildfires and promote vigorous and healthy forest stands that will be both resistant and resilient to natural disturbances; and provide forest products. The Project’s proposed actions include 2,053 acres of variable density thinning (“VDT”), 1,499 acres of roadside fuels reduction, 942 acres of prescribed fire, and a total of 7.1 miles of temporary road construction. PA at 2.

Please consider the following comments on the Project and PA:

Use of the Emergency Action Determination

Section 40807 of the Infrastructure Investment and Jobs Act¹ (IIJA) authorizes the Secretary of Agriculture to “make a determination that an emergency situation exists with respect to National Forest System land.”² An “emergency situation” is broadly defined as *any* situation the Forest Service determines poses a threat to human health and safety or a threat to National Forest System land or adjacent land.³ In making an “emergency situation determination,” the statute simply requires the Secretary to consider “relevant information.”⁴

If an emergency situation determination (ESD) is made, the Forest Service may carry out “authorized emergency actions . . . in order to achieve reliefs from hazards threatening human health and safety or mitigation of threats to natural resources on National Forest System land or adjacent land[.]”⁵ These authorized activities are limited to:

- Salvage logging of dead or dying trees
- Logging and removal of trees damaged by wind or ice
- Commercial and noncommercial sanitation logging to control insects or disease, including trees already infested with insects or disease
- Reforestation or replanting of fire-impacted areas through planting, control of competing vegetation, or other activities that enhance natural regeneration and restore forest species
- Removal of hazardous trees in close proximity to roads and trails
- Removal of hazardous fuels
- Restoration of water sources or infrastructure
- Reconstruction of existing utility lines
- Replacement of underground cables⁶

While authorized emergency actions “shall be conducted consistent with the applicable land and resource management plan,”⁷ they are subject to minimal environmental analysis and minimal public input. For applicable projects, the Forest Service has no obligation to consider any alternatives to the proposed action other than the “no action” alternative.⁸ In terms of public participation, the public is limited to a single comment period and is barred from filing objections to the agency’s final decision.⁹ This significantly limits the public’s ability to

¹ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 40807, 135 Stat. 429, 1112-1114 (2021) (codified at 16 U.S.C. § 6592c).

² 16 U.S.C. § 6592c(b)(1)(A).

³ 16 U.S.C. § 6592c(a)(2).

⁴ 16 U.S.C. § 6592c(b)(1)(C).

⁵ 16 U.S.C. § 6592c(b)(2).

⁶ *Id.*

⁷ *Id.* § 6592c(b)(3).

⁸ 16 U.S.C. § 6592c(c)(1).

⁹ *Id.* §§ 6592c(c)(3); 6592c(d).

meaningfully participate during the administrative review process and to influence the agency's decision, making it much more difficult to ensure the agency action is in fact consistent with the forest plan.

Emergency powers such as the one at issue here should be used sparingly. Instead, the Forest Service has viewed its ESD authority as a license to expedite NEPA reviews in order to increase the amount of logging projects on National Forest System lands that have signed decision documents. In many parts of the country, the use of ESDs is becoming the rule rather than the exception, regardless of the actual threat to human health or safety. The result is an agency that is increasingly unaccountable to the very public it claims to serve.

1. The First ESD (2023)

In early 2023, Secretary of Agriculture Tom Vilsack issued the first emergency situation determination (ESD) for National Forest System lands using the authority under Section 40807 of the infrastructure law.¹⁰ That determination was “[b]ased on the risks outlined in the [Wildfire Crisis Strategy]” and covered National Forest System lands in “250 high-risk fire sheds in the western U.S.”¹¹

Shortly after Secretary Vilsack issued the ESD, then Deputy Chief Chris French (now Associate Chief), hosted a webinar to explain to Forest Service personnel across the country what the ESD meant and how it would be implemented. During the Q&A part of the webinar, Deputy Chief French explained the agency's basis for the ESD and that it covered 27 million acres of national forest lands:

[AMANDA JOHNSON] Next question, can you speak to how the high-risk areas were designated? I would think that there would be overlap with the [Insect and Disease] treatment areas authorized by section 8204 of the Agriculture Act of 2014, but there doesn't appear to be much if any overlap.

[CHRIS FRENCH] Yeah, man. I could certainly talk to that. So one of the things that we wanna talk about here is that there's actually a whole set of efficiencies that you can use beyond these emergency authorities. And one of those, and there was, you know, direction that we sent out last year that says, if you're in a high-priority landscape, or one of these high-risk fire sheds, you should be starting with authorities that we have under the Healthy Forest Restoration Act, in the Insect and Disease Designations to help you with efficiencies to comply with the National Environmental Policy Act.

This [Emergency Situation] Declaration [issued by Secretary Vilsack in 2023], is based on high-risk fire. And the way that those fire sheds, the 250 high-risk fire sheds were developed is that working with our research branch, they looked at where we had the

¹⁰ Chief Randy Moore Letter to Forest Service National Leadership Council, *Implementing Secretary's Direction on Authorized Emergency Actions* (Mar. 10, 2023) (**Ex. 1**).

¹¹ *Id.* at 1.

highest potential for high-intensity fire and then what was the critical exposure to structures that was involved with that. And that is the basis for those 250 fire sheds. It's essentially where we have the *highest potential [for high-intensity fire]* and we have the *highest exposure to structures* . . . for this emergency declaration, for this 27 million acres, it is specifically in those 250 fire sheds that were identified in the Wildfire Crisis Strategy. *It's a big deal. This is a lot of acres . . . it is a game changer for a huge number, a huge amount of work that we have across the agency.*¹²

Associate Chief French could not have been clearer at the time. He considered the designation of 27 million acres of National Forest land under Secretary Vilsack's ESD a "huge number" of acres for a "huge amount of work." And Associate Chief French tied that work to those areas with the "highest potential for high-intensity fire" and "highest exposure to structures" (i.e., where emergency situation potentially exists).

2. The Second ESD (2025)

On March 1, 2025, the Trump administration ordered an "immediate expansion of American timber production" on federal lands, including National Forest System lands.¹³ EO 14225 not only directs the Forest Service to "increase domestic timber production" but to "fully exploit our domestic timber supply."¹⁴ EO 14225 is essentially a bullhorn directing the Forest Service to base decisions on what "will give the greatest dollar return or the greatest unit output," something Congress prohibited the agency from doing.¹⁵

Nevertheless, on April 3, 2025, Secretary of Agriculture Brooke Rollins issued a memo in response to EO 14225.¹⁶ In the memo, Secretary Rollins cited Section 40807 of the infrastructure law to issue a second ESD covering 112,646,000 acres of National Forest System lands (59% of the entire system).¹⁷ This nearly *quadrupled* the acreage covered by Secretary Vilsack's ESD issued just two years earlier, fitting a pattern in the current administration for using emergency powers as the default approach to implementing policy.¹⁸

¹² See U.S. Forest Serv., *Virtual Emergency Declarations: Workshop Meeting* (Feb. 1, 2023) (quoted language at 1:18:43 – 1:20:46, cleaned up for clarity) (emphasis added), <https://www.youtube.com/watch?v=KXADrGm6aoo> (transcript included as **Ex. 2**; quoted language on p. 30).

¹³ Exec. Order No. 14225, 90 Fed. Reg. 11365 (Mar. 6, 2025) (EO 14225).

¹⁴ *Id.*

¹⁵ 16 U.S.C. § 531(a).

¹⁶ Secretary Rollins Memorandum 1078-006, *Increasing Timber Production and Designating and Emergency Situation on National Forest System Lands* (Apr. 3, 2025) (**Ex. 3**).

¹⁷ *Id.*

¹⁸ See Byron Tau et al., *The 911 presidency: Trump flexes emergency powers in his second term*, Associated Press, June 7, 2025, <https://apnews.com/article/trump-emergency-powers-tariffs-immigration-5cbe386d8f2cc4a374a5d005e618d76a>. (noting that of the 150 executive orders issued by the current administration, 30 of them "have cited some kind of emergency power or authority, a rate that far outpaces his recent predecessors") (**Ex. 4**).

Also on April 3, 2025, Associate Chief French sent a letter to all Regional Foresters and Deputy Chiefs regarding implementation of Secretary Rollins' memo.¹⁹ Associate Chief French directed a 25% increase in the national timber target over the next 4-5 years.²⁰ In order to execute that increase, the Associate Chief directed all Line Officers to:

use innovative and efficient approaches to meeting the minimum requirements of the [NEPA], Endangered Species Act, National Historic Preservation Act, and other environmental laws, including categorical exclusions, emergency authorities (*including the Secretary's recent expanded Emergency Situation Determination*), condition-based management, determinations of [NEPA] adequacy, and staged or tiered decision-making.²¹

So even though Associate Chief French considered Secretary Vilsack's ESD to already cover a "huge number" of acres for a "huge amount of work" in areas with the "highest potential for high-intensity fire" and "highest exposure to structures," he nevertheless issued instructions to agency personnel to use Secretary Rollins' ESD, which quadrupled the acreage covered under the emergency authority.

The Associate Chief also directed Forest Supervisors to use timber designations by prescription (DxP) and designations by description (DxD) as "the default approach in implementing timber projects."²² Unlike individual tree marking, DxP and DxD shifts the responsibility for deciding which trees to cut in a timber sale to the logging companies contracted to implement approved projects. This increases the risk that the wrong trees are cut, too many trees are cut, and even outright timber theft.

For example, multiple timber program audits in the Pacific Northwest have warned there are tradeoffs with using DxP and that it should only be used for non-complex "prescriptions." According to a 2016 audit of the Wallowa-Whitman National Forest's timber program, while the use of DxP "reduces the cost of sale preparation (less staff time and no marking paint)," there are multiple other factors that far outweigh this perceived benefit. The auditors explained that in order to use DxP:

. . . the forest has to have *clearly understood prescriptions* **since the purchaser will be selecting the trees to be cut or left**. The desired conditions have to be *clearly articulated so the end result produced by the purchaser is what the Forest Service intended*. The use of DxP increases the contract administration workload over other forms of designating timber, particularly in monitoring the actual cutting of the purchaser-selected trees and the end results. It requires personnel and skills to accomplish scaling, such as surveillance of haul routes, accounting and auditing scale receipts, and developing alternate scaling agreements. In order to use DxP, the Forest

¹⁹ Associate Chief French Letter to Regional Foresters and Deputy Chiefs, *Implementation of Secretarial Memo 1078-006* (Apr. 3, 2025) (Ex. 5).

²⁰ *Id.* at 1.

²¹ *Id.* at 2 (emphasis added).

²² *Id.*

*Supervisor has to ensure that staff with the necessary skills and certifications are available to administer timber sales and stewardship contracts. If the forest's timber theft plan does not include scaled sales, the plan must be updated before this method is utilized.*²³

In a 2017 audit of the Fremont-Winema's timber program, regional staff explained how multiple timber sales had "very complex prescriptions" that make it "difficult to assure credibility cruise and volume determination, and proper administration to achieve desired end results."²⁴ The auditors continued that "[i]t was apparent through discussion with Forest personnel there are different interpretations of the prescription which may or may not comply with NEPA."²⁵ That is an admission that project implementation using DXP increases the likelihood of non-compliance. But there is no remedy for putting trees back on stumps.

In sum, the Forest Service has been directed to "fully exploit" the National Forest System for logging. That logging is being increasingly approved under suspect emergency authorizations, among other authorities, that limit environmental analysis, meaningful public input, and the ability to seek judicial review. And once logging projects are approved, the decisions about which trees to cut are being turned over to the very companies that have a financial stake in those projects.

Turning to the Anvil Project, very little (if any) of the project area was included in Secretary Vilsack's ESD, which makes sense given the location on the west side of the Cascades. However, 89% of the treatment units are located within the area designated under Secretary Rollins' ESD. The dramatic increase of acreage covered by Secretary Rollins' ESD was arbitrary, as is the specific application of that authority to this project area. The Forest Service should reconsider its use of the emergency authority for this Project.

Plantation Thinning

The Project proposes to commercially harvest using VDT on approximately 2,053 acres of which approximately 1,825 acres are within C1 Timber Emphasis and Matrix land use allocations. PA at 2. An additional 45 acres of VDT is proposed in Late-Successional Reserves ("LSR") and 243 acres in Riparian Reserves. Silviculture Report at 6. Stands proposed for thinning are less than 80 years old and comprise a basal area of 160 square feet per acre, on average.²⁶ The proposed action is intended to address overstocked stands and aims to reduce residual basal area to approximately 80-130 square feet per acre. Gaps up to 2 acres in size are also included in the

²³ Regional Product Accountability Audit and Timber Program Review, Wallowa-Whitman National Forest, p. 153 (Apr. 11-15, 2016) (Ex. 6) (emphasis added).

²⁴ Regional Product Accountability Audit and Timber Program Review, Fremont-Winema National Forest, p. 30 (Apr. 24-28, 2017). (Ex. 7). A 2017 audit of the Malheur National Forest's timber program expressed similar concerns. See Regional Product Accountability Audit and Timber Program Review, Malheur National Forest, p. 69 (May 8-12, 2017) (Ex. 8).

²⁵ Fremont-Winema, p. 30.

²⁶ The PA notes the average basal area as 160 square feet per acre, while the Silviculture Report notes the average basal area as 211 square feet per acre. Silviculture Report at 9. Please clarify the average basal area for the plantation units proposed for thinning.

Project, as are skips. *Id.* at 2-3. The PA identifies short-term (10 years post treatment) increases in diameter growth rates and rapid response from understory vegetation in gaps; and long-term (40 years post-treatment) acceleration of late-successional forest, increased tree growth, and improved resilience to drought, insect and disease. Additionally, the PA identifies short-term adverse impacts in the form of increased fine fuels and non-native plant cover. PA at 8.

Commenters are generally supportive of carefully planned and implemented thinning in dense, young plantations under 80 years old. We appreciate that the Project proposes commercial treatment only in stands ranging from 31 to 61 years old. Thinning in young plantations involves trade-offs that must be carefully evaluated and weighed, but it is generally accepted that the benefits of thinning in young plantations outweigh the adverse impacts, thus creating net benefits for the stand. Nonetheless, trade-offs when thinning in young plantations include, but are not limited to, increased carbon emissions, impacts from road construction and reconstruction, impacts to wildlife and habitat, impacts to future recruitment of snags and down wood, spread of invasive plants and weeds and impacts to fire hazard caused by movement of fuels and modified microclimates.

One common consequence of thinning in plantation stands includes impacts to snag and downed wood recruitment in the ecosystem. Intensive wood production practices may alter the cycle of structural development both by truncating succession before large structures develop and by removing most existing structures during harvest.²⁷ In other words, thinning captures mortality, thus reducing the pool of live trees that may become snags or downed wood in the future. The Project employs skips in which 15% of each treatment unit will retain unthinned areas to serve as wildlife refugia and recruitment sites for future snags and coarse woody debris. Silviculture Report at 9. While Commenters appreciate that skips are partially intended to serve as dead wood recruitment, skips only cover 15% of treatment units, leaving the other 85% vulnerable to decreased snag and downed wood recruitment. The Project PA also indicates that the proposed action may include snag and down wood creation treatments, but does not provide further details about this aspect of the Project. The Forest Service should ensure that sufficient live trees outside of skips are retained in each treatment unit to ensure a recruitment pool for snags and downed wood.

Snags and downed wood provide habitat for several species, and commercial thinning has the potential to affect the habitat needs of various species in the long term. Several small mammals, including the northern flying squirrel, form the prey base for northern spotted owl and are among the species associated with abundant snags and downed wood. The fruiting bodies of hypogeous fungi are a food source of northern flying squirrels and are also associated with down logs, suggesting that there are complex, indirect paths through which dead wood supports spotted owls.²⁸ The Project Wildlife Report acknowledges the negative impacts of traditional thinning on northern flying squirrels. Wildlife Report at 19-20. In particular, the Wildlife Report

²⁷ A. J. Hansen, T. A. Spies, F. J. Swanson, and T. L. Ohmann, *Conserving biodiversity in managed forests – Lessons from natural forests*, *BioScience* 41(6):382- 392 (1991).

²⁸ Thomas Spies, Michael Pollock, Gordon Reeves, and Tim Beechie, *Effects of Riparian Thinning on Wood Recruitment: A Scientific Synthesis - Science Review Team Wood Recruitment Subgroup* 36 Jan 28, 2013.

notes that the majority of studies indicate that thinning causes a decrease in flying squirrel densities in the near term, citing Manning 2012, and that most thinning is likely to suppress flying squirrel populations for several decades, citing Wilson 2010. Given the northern spotted owl population trajectory, short-term impacts have the potential to greatly influence the survival of the species, even if better flying squirrel habitat is provided over the long term. Accordingly, the Forest Service should aim to retain a larger pool for dead wood recruitment outside of skips as well.

Under the Northwest Forest Plan (“NWFP”), thinning or other silvicultural treatments in stands under 80 years old within LSRs are subject to review by the Regional Ecosystem Office (“REO”) to ensure that the treatments are beneficial to the creation of late-successional forest characteristics. NWFP S&G at C-12. The Project does not currently indicate that the REO reviewed the proposed treatments, nor that the Project falls within an existing REO exemption. As such, the Project is in violation of the NWFP with respect to VDT within the LSR land allocation stands. The Forest Service should consider dropping the 45 acres of treatment proposed in LSR from the Project and allow those stands to continue to develop naturally. Otherwise, the Forest Service must demonstrate that treatment in the 45 acres of LSR is in compliance with the NWFP.

Riparian Reserve Treatments

The Project proposes to treat approximately 683 acres of Riparian Reserves, including 34 acres in the A-9 Key Site Riparian Reserve land use allocation. Silviculture Report at 6. The majority of treated Riparian Reserves, 649 acres, will overlap with the C-1 Timber Emphasis land use allocation. PA at 3. Proposed treatment in these 649 acres will consist of 406 acres of roadside fuel treatments and 243 acres of VDT. *Id.* at 2-3. Roadside fuel treatments are discussed in more detail below. Prescribed burns in Riparian Reserves will largely be low severity burns, with moderate severity burns accounting for no more than 20% of burned areas. *Id.* at 15; Appendix A at 13. As previously stated, treatment using VDT will aim to reduce the basal area of stands to an average of 80-130 square feet per acre. Commenters urge the Forest Service to reduce basal area in Riparian Reserves to no less than 100 square feet per acre to help preserve cool microclimates and retain moisture.

The NWFP Standards & Guidelines generally prohibit timber harvest in Riparian Reserve unless silviculture treatments are used to “control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy (“ACS”) objectives,” and the Forest Service can show that the silvicultural treatment will not “retard or prevent attainment of the Aquatic Conservation Strategy Objectives.” NWFO S&G at C-31-32.

The proposed treatments pose several risks to riparian environments in the Project area that are inconsistent with the ACS objectives. First, thinning will likely hamper the recruitment of large

woody debris (“LWD”) into streams.²⁹ Second, thinning, and the related activities of timber hauling and road maintenance, will lead to increased sedimentation and decreased shade. Third, thinning in Riparian Reserves “may affect, is likely to adversely affect listed fish and designated critical habitat, and may adversely affect [essential fish habitat].” Fisheries Report at 1.

The recruitment of LWD is a critical component of stream health. LWD plays an important role in the distribution and health of vegetation in fluvial and riparian habitats.³⁰ LWD is key to habitat formation for aquatic species and stream geometry.³¹ LWD regulates the downstream transfer of sediment and organic material.³² Accordingly, hampering the recruitment of LWD will significantly impact stream health and the viability of flora and fauna that depend on it.

The Project PA claims that the proposed treatments will promote structural diversity in the ecosystem and promote heterogeneity in Riparian Reserves to “benefit their long-term function to provide shade and recruitment of large woody debris. PA at 8. This claim likely does not reflect reality. Studies show that thinning in Riparian Reserves negatively impacts large dead wood recruitment in both the short and long term.³³ The PA acknowledges that thinning “could result in some declines in the density of instream wood due to reductions in wood volume within riparian areas” in the short term. PA at 9. In the long term, counter to the claim in the PA regarding long-term recruitment of in-stream large wood, “thinning trees in second-growth forests reduces suppression mortality and thus the recruitment of in-stream wood.”³⁴

Further, thinning may negatively impact the growth of larger trees that later serve as input for recruitment into streams in the long term. Kim Kratz wrote in a position paper to the Interagency Coordinating Subgroup,

Thinning accelerated the development of large diameter trees by about 20 years such that there were more live trees > 18” dbh in the two decades following thinning, relative to the unthinned stand, but this advantage was short-lived. Three

²⁹ Stan Gregory, 2010. *What About Riparian Systems: Who Benefits from an Early Seral Forest Condition. Workshop - Early Seral Forest - We know we need it -- How do we get it?* Presentation sponsored by the Central Cascades Adaptive Management Partnership and NW Oregon Ecology Group <http://ecoshare.info/2010/07/06/what-about-riparian-systems-who-benefits-from-an-early-seral-forest-condition-gregory/>.

³⁰ Kevin L. Fetherston, Robert J. Naiman and Robert E. Bilby, *Large Woody Debris, Physical Processes, and Riparian Forest Development in Montane River Networks of the Pacific Northwest*, *Geomorphology* 13, 141-2 (1995).

³¹ Peter A. Bisson, Robert E. Bilby, Mason D. Bryant, C. Andrew Dolloff, Glenn b. Grette, Robert A. House, Michael L. Murphy, K Victor Koski, and James R. Sedell (1987), *Large Woody Debris in Forested Streams in the Pacific Northwest: Past, Present, and Future*, In: Salo, Ernest O.; Cundy, Terrance W., eds. *Streamside management: forestry and fishery interactions: Proceedings of the symposium*; Seattle, WA. Contrib. 57. Seattle, WA: College of Forest Resources, University of Washington: 143-190.

³² John Faustini and Julia Jones, *Influence of Large Woody Debris on Channel Morphology and Dynamics in Steep, Boulder-Rich Mountain Streams, Western Cascades, Oregon*, *Geomorphology* 51, 188 (2002).

³³ Lee E. Benda, S. E. Litschert, Gordon Reeves, and Robert Pabst, *Thinning and In-Stream Wood Recruitment in Riparian Second Growth Forest in Coastal Oregon and the Use of Buffers and Tree Tipping as Mitigation*, *J. For. Res.* 24, 7 (2015).

³⁴ *Id.*

decades after thinning, there were more live trees > 18" dbh in the unthinned stand and five decades after thinning there were twice as many live trees >18" dbh in the unthinned stand relative to the thinned stand. A similar trajectory was observed for the live trees > 24" dbh.³⁵

ACS objectives, such as ACS objective 8, may be better served by leaving Riparian Reserves untouched. Thinning in Riparian Reserves to achieve project goals such as to "improve forest health and vigor" and "shift the structure and composition of forested stands towards desired conditions" may actually result in more negative outcomes. As Chris Frissell notes:

In my experience, natural disturbance processes are so diverse, so frequent, so unpredictable, and expressed across a broad enough range of scales in riparian forests that there is little or no justification for imposing additional human disturbance, in the form of thinning, tree tipping, or similar practices, with the expectation of producing a specific stable-state outcome. In fact, the complex and dynamic regime of natural disturbance renders any active human intervention highly unlikely to produce the anticipated or desired outcome for any significant length of time. In truth the interaction of unpredictable natural disturbance with imposed human disturbance makes it far more likely that unanticipated and undesired outcomes will occur.³⁶

Thinning to encourage future LWD, a process that scientific literature demonstrates may not be effective, will also harm the recruitment of small down wood. Small down wood is important because "[t]he effect that wood has on [fish] habitat is related to the size of the piece of wood relative to the channel size and gradient."³⁷ In small streams, of which most in the Project area are, small down wood adequately performs the same ecological functions as LWD. In larger streams, small down wood positively impacts stream health through accumulation.³⁸

The very process of thinning in Riparian Reserves may in itself lead to undesired outcomes. Frissell wrote:

Thinning and fuels reduction by means of mechanized equipment or for commercial log removal purposes should be generally prohibited in Riparian Reserves and Key Watersheds. Any thinning or fuels treatment that does occur as a restorative treatment in Riparian Reserves (e.g., to remove non-native tree species from a site) should retain all downed wood debris on the ground. Thinning projects that involve road and landing (including those deemed "temporary") construction and/or reconstruction of road segments that have undergone significant recovery through non-use should also be prohibited, due to their long-term impacts on critical watershed elements and processes.³⁹

³⁵ Kim Kratz, Ph.D., Issue Paper for Western Oregon. NMFS, Oregon State Habitat Office. 7-23-2010. Appendix 1, page 38.

³⁶ Chris Frissell, personal communication, January 15, 2019.

³⁷ East Alsea Landscape Management Project – EA Appendix H - Fish BE, 4-18-2011.

³⁸ Frank Triska and Kermit Cormack (1980), *The Role of Wood Debris in Forests and Streams*, In: Waring, Richard H., ed. *Forests: fresh perspectives from ecosystem analysis: proceedings of the 40th annual biology colloquium*; Corvallis, OR. Corvallis, OR: Oregon State University Press: 171-190.

³⁹ Frissell, CA, Baker RJ, DellaSala DA, Hughes RM, Karr JR, McCullough DA, Nawa RK, Rhodes J,

Frissell's concern stems from the negative impacts of sedimentation and soil compaction caused by heavy equipment. While the use of heavy equipment in Riparian Reserves is limited and must occur on a slash covered path, thinning will likely still increase sedimentation. PA Appendix A at 5. Indeed, the Fisheries Report states that the Project "is likely to affect listed fish and designated critical habitat" due to sedimentation stemming from timber haul and road maintenance. Fisheries Report at 1.

Thinning will also reduce canopy cover which regulates stream temperatures and protects fish from predators. The proposed action requires thinning in Riparian Reserves to maintain at least 50% canopy cover to retain ACS objectives. PA Appendix A at 4. Studies show that restoring canopy cover to 85% can reduce stream temperatures by as much as 1°C which improves fish habitat and may help reduce the impacts of global warming on fish populations.⁴⁰ While a canopy cover of 85% may not be obtainable in the short term, protection of existing canopy cover will aid ACS objectives.

The negative impact to listed fish, critical habitat, and watershed health caused by reduced LWD, reduced canopy cover, and increased sedimentation runs counter to the ACS objectives. Yet, the PA justifies the risk for the purposes of wildfire mitigation and creating desired structure in the forest. PA at 2. As demonstrated by scientific literature, thinning is unlikely to encourage the desired structure and poses several risks to habitat quality. The justification of thinning to prevent wildfire may likewise be ineffective. A study on the impacts of wildfire in riparian zones found that:

Activities such as logging, construction of fire access routes along rivers and road construction along riparian corridors may lead to fires of greater frequency and severity in riparian areas (Reeves and others 2006). Other changes to river function such as flow regulation also can have indirect consequences on the riparian fire regime, such as reducing the accumulation of wood debris by reduced flooding. Protecting riparian buffers from fire is likely to change the structure and possibly the function of riparian areas (Agee 1998) as fire exclusion can eventually lead to extreme, high severity fires through the accumulation of fuels. We believe that a greater understanding of the link between the riparian zone and the surrounding upland matrix, together with the relationship to disturbance regimes such as fire and flooding, will improve landscape and watershed management overall... Management for riparian fires also needs to consider habitat quality as well as habitat diversity at the landscape scale while considering the historic range of variability. For higher order streams at least, because riparian areas represent different vegetation community types, they should be considered separately in terms of fire management.⁴¹

Scurlock MC, and Wissmar RC (2014), *Conservation of Aquatic and Fishery Resources in the Pacific Northwest: Implications of New Science for the Aquatic Conservation Strategy of the Northwest Forest Plan – Final Report*, Coast Range Association. 35p.

⁴⁰ Matthew R. Fuller, Peter Leinenbach, Naomi E. Detenbeck, Rochelle Labiosa, and Daniel J. Isaak, *Riparian Vegetation Shade Restoration and Loss Effects on Recent and Future Stream Temperatures*, *Restoration Ecology* 30(7): e13626 (2022).

⁴¹ Neil E. Pettit and Robert J. Naiman, *Fire in the Riparian Zone: Characteristics and Ecological Consequences*, *Ecosystems* 10, 684 (2007).

A study on wildfires reducing vegetation found that “vegetation re-growth happens with sufficient speed that the fuel limitation effects from fire are short-lived.”⁴² This same logic applies when vegetation is manually thinned. The thinned area regrows vegetation with such speed that the reduction of wildfire risk is short lived. Unlike natural vegetation reduction through wildfires, manual thinning can increase the future risk of severe fires through related activities such as logging, and the construction of roads and fire access routes along riparian zones.⁴³

The proposed action as it overlaps with Riparian Reserves fails to properly weigh the Project’s potential harm to riparian and fluvial habitat against the purported benefits in terms of wildfire prevention. Further, the Project fails to consider that thinning, in an effort to prevent wildfires, may actually increase the risk and severity of wildfires in the long term. Rather, the objectives of the ACS and long-term stream health may be better served by leaving Riparian Reserves untreated and allowing natural processes to continue unhampered by human interference. Commenters urge the Forest Service to ensure that VDT prescriptions within Riparian Reserves are less heavy-handed than upland prescriptions in order to preserve the functionality and habitat values that Riparian Reserves provide.

Roadside Fuels Reduction

The Project proposes roadside fuel treatments along National Forest System Roads 57, 5720, 5730, and 5830 for a total of approximately 1,499 acres of treatment. PA at 3. The proposed treatment would remove trees up to 10 inches in diameter at breast height (“DBH”) while retaining larger trees to maintain overstory canopy cover and shade. Large down wood exceeding 12 inches DBH would be maintained. Treatments are proposed up to 150 feet from the edge of the road, but may be reduced to avoid or minimize impacts on sensitive resources. *Id.* The proposed roadside fuel treatments aim to enhance fire suppression by reducing tree density and removing ladder fuels. Silviculture Report at 19.

Like thinning in plantation units, roadside fuel treatments can have significant tradeoffs, especially when accomplished with commercial logging. Roadside fuel treatments can degrade habitat for wildlife, including big game that need cover to cross roads; fuel treatments in Riparian Reserves can reduce valuable shade and wood recruitment; and fuel treatments can increase the risk of invasive weeds. To mitigate the adverse tradeoffs associated with roadside fuel treatments, the Forest Service can ensure that fuel breaks occupy the minimum width necessary to accomplish fuel break function in harmony with other forest values. The Forest Service can also ensure that roadside fuel treatment areas are densely shaded to reduce the risk that surface and ladder fuels will proliferate, reduce future maintenance costs, reduce the risk of weeds, and reduce barriers to wildlife movement.

⁴² Matthew D. Hurteau, Shuang Liang, A. LeRoy Westerling, and Christine Wiedinmyer, *Vegetation-Feedback Reduces Projected Area Burned Under Climate Change*, Scientific Reports 9 (2019).

⁴³ *Supra* note 28.

The Project PA and Silviculture Report are not entirely clear regarding the stand age and characteristics of the roadside fuel treatment units. Are they also comprised of plantation stands under 80 years old? If any of the roadside fuel treatment units are naturally-regenerated or over 80 years old, the Forest Service should consider dropping those units from treatment and instead focus fuel treatments in previously-managed plantations. The primary fire risk is posed by plantations, and fuel reduction is not warranted in mature or old-growth stands. Recent studies on the role of stand structure and fire severity on the west side of the Cascades suggest that older, closed-canopy forests with higher biomass are more fire resistant than young plantations with smaller trees under more moderate weather conditions. Small trees with thinner bark are more exposed to lethal temperatures than large trees with thicker bark.⁴⁴ Commenters appreciate that tree removal is limited to trees up to 10" DBH and that treatments will preserve legacy trees which are more resilient to fire.

The Silviculture Report states that larger trees will be retained in order to maintain crucial overstory canopy cover and shade. Silviculture Report at 10. Will canopy cover remain the same before and after the proposed treatment? Reduction in canopy cover can lead to increased penetration of sunlight to the forest floor which creates hotter, windier, and drier conditions. These conditions can stimulate the growth of surface and ladder fuels that may make fire hazard worse if not properly maintained. Maintaining a cool, moist microclimate through sufficient canopy cover retention will help mitigate fire risk by retaining moisture in surface fuels and suppressing the growth of more surface and ladder fuels.

Similar to the plantation stands proposed for commercial VDT, any roadside fuels treatments within LSR must be reviewed by the REO or fall within an established REO exemption. Again, the Project does not demonstrate compliance with the NWFP regarding REO review of roadside fuels treatments within LSR.

Northern Spotted Owl

There are 28 known northern spotted owl sites located within the Project area, and another 2 known sites that partially overlap with the Project area. All 30 known owl sites have suitable habitat present. Wildlife Report at 6. In total, the Project area contains approximately 19,162 acres of nesting, roosting or foraging ("NRF") habitat which is considered suitable habitat. *Id.* Currently, four of the 30 known site home ranges within the Project area are below the 40% threshold for suitable habitat while 11 of the 30 known site core areas are below the 50% threshold for suitable habitat. *Id.* at 6-8. The approximately 2,053 acres of the Project area that are proposed for VDT are currently considered dispersal habitat for northern spotted owl. The Wildlife Report states that treatment will result in an approximately 47% canopy cover remaining, and thus the dispersal stands will not be removed. *Id.* at 16. Additionally, 885 acres of

⁴⁴ Matthew J. Reilly, Aaron Zuspan, Joshua S. Halofsky, Crystal Raymond, Andy McEvoy, Alex W. Dye, Daniel C. Donato, John B. Kim, Brian E. Potter, Nathan Walker, Raymond J. Davis, Christopher J. Dunn, David M. Bell, Matthew J. Gregory, James D. Johnston, Brian J. Harvey, Jessica E. Halofsky, Band ecky K. Kerns, *Cascadia Burning: The Historic, but Not Historically Unprecedented, 2020 Wildfires in the Pacific Northwest, USA*, *Ecosphere* 13(6): e4070 (2022).

the proposed VDT treatment units are designated as critical habitat. The Proposed roadside fuels treatments contain approximately 1,106 acres of designated critical habitat. *Id.* at 25.

Overall, the proposed action may affect, but is not likely to adversely affect territorial or dispersing northern spotted owls and their habitat. Additionally, the proposed action may affect, but is not likely to adversely affect northern spotted owl critical habitat. *Id.* at 23-26.

Commenters appreciate the Project Design Criteria (“PDC”) intended to reduce short-term effects on the northern spotted owl, including the retention of snags, downed wood and legacy trees, restrictions on activities that disturb northern spotted owl; and avoidance of suitable habitat modification. However, Commenters are concerned about the Project’s impacts on the species as habitat loss and competition with barred owls continues to push the northern spotted owl towards extinction. Commenters ask that the Forest reconsider two important aspects of the Project: (1) northern spotted owl nest determinations, and (2) the extent of acreage to be thinned.

There are 30 known northern spotted owl home ranges overlapping the Project area, but the Wildlife Report notes that “there is potential for unknown nesting owls.” Wildlife Report at 6. The report also notes that the information on northern spotted owl nesting sites is historical, explaining that there are few recent surveys for northern spotted owl and that historical nest sites can be used for many years. *Id.* at 5. What survey protocol was used to determine nest site information, and when where those surveys conducted that the Forest Service is now relying on as historic nest site information? The Forest Service should consider completing new surveys for northern spotted owl in order to fully understand the potential impact of the Project on the species.

The U.S. Fish and Wildlife Service (“USFWS”) has recommended using the 2011 Protocol for Surveying Proposed Management Activities that may Impact Northern Spotted Owls (“2011 Protocol”). The 2011 Protocol noted that research had raised concerns regarding the effectiveness of prior surveys, particularly those which do not result in spotted owl detections. Specifically, the presence of barred owls was noted to have a suppression effect on spotted owl detection rates, and survey results that do not account for this suppression effect may provide false or insufficient information about spotted owl presence in survey areas and ultimately lead to forest management activities that may impact spotted owls in a manner conflicting with the Endangered Species Act.⁴⁵ Use of the 2011 Protocol serves two primary purposes: (1) provide a methodology that results in adequate coverage and assessment of an area for the presence of spotted owls, and (2) ensure a high probability of locating resident spotted owls and identifying owl territories that may be affected by a proposed management activity, thereby minimizing the potential for unauthorized incidental take.⁴⁶ If the Forest Service used an outdated methodology for surveying northern spotted owls, it must provide updated information using more recent surveys to help inform its NEPA analysis before making a decision for the Project.

⁴⁵ Protocol for Surveying Proposed Management Activities that may Impact Northern Spotted Owls, U.S. Fish and Wildlife Service, Revised January 9, 2012, p. 4.

⁴⁶ *Id.* at 4–5.

To more accurately detect spotted owl presence, the Forest Service should conduct surveys using autonomous recording units (“ARUs”), if not already done. Duchac et al. (2020) stated “ARUs can effectively detect Northern Spotted Owls when they are present, even in a landscape with high Barred Owl density, thereby facilitating the use of passive, occupancy-based study designs to monitor Northern Spotted Owl populations.”⁴⁷ Additionally, Appel et al. (2023) stated:

Given the sensitivity of spotted owls to land management decisions, it is critical that survey methods—especially those designed to inform protection levels by determining pair status—account for imperfect detection of pairs, which are the most important biological unit in need of protection. The probability of detecting and classifying a pair where present (0.03 at a single station and week) was quite low and suggests that a requirement for detecting both female and male owls to determine pair status with high confidence would require an extensive and onerous survey effort and may be unachievable. We suggest that single detections could be used as an alternative benchmark to ensure protection of sites used by spotted owl pairs. Stations in hexagons with potential spotted owl pairs had the highest weekly detection probability (0.169), most likely driven by males exhibiting more active calling behavior in territorial defense when paired. This pattern of higher detectability for paired owls has been observed previously (Duchac et al., 2020; Tempel & Gutiérrez, 2013). ... We agree with Olson et al. (2005) that these detection probabilities are sufficient for many studies, but the consequences of missing a pair or of misidentifying a pair as a single owl are high when management actions are dependent on correctly classifying states. Using only naïve survey results and requiring both sexes to be detected as the basis of pair determinations would likely result in loss of habitat and be detrimental for spotted owl pairs. Female spotted owls call less frequently than males, especially away from the nest and using the 4-note hoot (Ganey, 1990; Reid et al., 1999; Wood, Schmidt, et al., 2019); therefore, female calling behavior is important to consider when determining pair status. Reid et al. (1999) found that male spotted owls were more than twice as detectable as females using the commonly employed 10-min nighttime callback protocol designed to detect territorial owls (Franklin et al., 1996). Using passive acoustic monitoring, we detected female 4-note calls only in hexagons where males were also detected.”⁴⁸

The Forest Service should conduct new surveys using ARUs to supplement historic nest site information in order to accurately determine spotted owl presence in the Project area, which will ultimately help the Forest Service conduct a more accurate effects analysis for the species.

The Forest Service should also consider preserving as much dispersal habitat in its current as possible, especially within designated critical habitat. This concern applies with extra force to the Project’s contemplated thinning within the core and home ranges of known northern spotted owl nest sites. Even though the Project’s proposed VDT would not downgrade any habitat, any thinning that nominally maintains current habitat designations still disrupts northern spotted

⁴⁷ Leila S. Duchac, Damon B. Lesmeister, Katie M. Dugger, Zachary J. Ruff, and Raymond J. Davis, *Passive acoustic monitoring effectively detects Northern Spotted Owls and Barred Owls over a range of forest conditions*, The Condor: Ornithological Applications, Volume 122, Issue 3 (2020).

⁴⁸ Cara L. Appel, Damon B. Lesmeister, Adam Duarte, Raymond J. Davis, Matthew J. Weldy, and Taal Levi, *Using passive acoustic monitoring to estimate northern spotted owl landscape use and pair occupancy*, Ecosphere 14(2), e4421 (2023).

owl behavior. In other words, even if habitat is not technically “downgraded” or “removed”, the quality of the habitat is still negatively impacted, and thus northern spotted owl are impacted as well. For example, the Bureau of Land Management has acknowledged that:

Current research has shown that spotted owls are likely to increase the size of their home ranges to utilize untreated stands in preference to newly treated stands both during and after harvest. Factors that reduce the quality of habitat within a home range or cause increased movement by owls in order to meet prey requirements may decrease the survival and reproductive fitness of owls at that site (Meiman et al., 2003).⁴⁹

Additionally, Courtney (2004) summarized spotted owl habitat use studies and found positive relationships between spotted owl habitat use and several forest attributes that are detrimentally affected by thinning, including canopy volume, canopy closure, snag basal area, or volume, and log volume.⁵⁰ The Forest Service should also consider that NSO foraging is positively associated with snag and dead wood volume, both of which are adversely affected by thinning which can have long-term effects on dead wood recruitment. As the USFWS recently explained:

Foraging activity is positively associated with tree height diversity (North et al. 1999, p. 524), canopy closure and woody debris (Irwin et al. 2000, p. 180; Courtney et al. 2004, pp. 5-15), snag volume, density of snags greater than 20 in (50 cm) dbh (North et al. 1999, p. 524; Irwin et al. 2000, pp. 179-180; Courtney et al. 2004, pp. 5-15), density of trees greater than or equal to 31 in (80 cm) dbh (North et al. 1999, p. 524), volume of woody debris (Irwin et al. 2000, pp. 179-180), and young forests with some structural characteristics of old forests (Carey et al. 1992, pp. 245-247; Irwin et al. 2000, pp. 178-179). Habitat use is influenced by prey availability. Ward (1990, p. 62) found that spotted owls foraged in areas where the occurrence of prey was more predictable within older forests and near ecotones of old forest and brush seral stages. The availability or abundance of prey can in turn influence reproductive success (Rosenburg et al. 2003, pp. 1720-1723).⁵¹

Furthermore – and as the Forest Service properly recognizes, thinning has an adverse effect on flying squirrels, which can constitute up to 50% of northern spotted owl diet. Wildlife Report at 19. Recent evidence shows that thinning does in fact lead to a multi-decade decline in the number of flying squirrels. Manning et al (2011) found that densities of flying squirrels are particularly sensitive to thinning in young Douglas-fir forests for at least 12 years after treatment.⁵² Additionally, Wilson and Forsman (2013) found that:

⁴⁹ Roseburg BLM 2010. Third Elk Commercial Thinning EA.

⁵⁰ S. P. Courtney, Jennifer Blakesley, Richard Bigley, Martin L. Cody, John Philip Dumbacher, R. C. Fleischer, Alan B. Franklin, Jerry F. Franklin, Richard Jhossep Gutierrez, John M. Marzluff, and Lisa A. Sztukowski, *Scientific evaluation of the status of the Northern Spotted Owl*, Sustainable Ecosystems Institute (2004).

⁵¹ Fish and Wildlife Service 2024. Sand Lake Biological Opinion.

⁵² T Manning, J.C. Hagar, and B. C. McComb, *Thinning of young Douglas-fir forests decreases density of northern flying squirrels in the Oregon Cascades*, Forest Ecology and Management 264:115-124 (2011).

[T]hinning reduces the abundance of some tree-dwelling rodents, especially Northern Flying Squirrels (*Glaucomys sabrinus*) and Red Tree Voles (*Arborimus longicaudus*), that are important prey species for Northern Spotted Owls (*Strix occidentalis caurina*). Recent studies suggest that reductions in Northern Flying Squirrel abundance following thinning may be driven by increased susceptibility to predation created by removal of critical above-ground cover. Predation, lack of canopy connectivity, and reduction in suitable nest substrates may all contribute to reduced Red Tree Vole abundance following thinning. The longterm benefits of some thinning treatments may be positive for both flying squirrels and Red Tree Voles, but may not be realized for several decades or more, as the development of a midstory layer of trees may be critical to the success of thinning in promoting habitat for these species.⁵³

Given the importance of flying squirrels and other small mammals to the diet of the spotted owl, the Forest Service must ensure that thinning does not significantly reduce prey populations. Commenters appreciate that the Project aims to retain snags.

Preserving as much northern spotted owl habitat as possible is extremely important in light of competitive pressure from the barred owl. The barred owl uses similar habitat, and consumes many of the same food sources as northern spotted owl. Hundreds of thousands of acres of suitable owl habitat that were assumed in the NWFP to be available for spotted owl nesting, roosting, and foraging are now occupied and defended by territorial barred owls to the exclusion of spotted owls. Accordingly, there is an urgent need to protect additional suitable spotted owl habitat while also reducing the loss of new habitat in order to increase the likelihood of spotted owl survival.

As stated by Jenkins et al. (2021),

Barred owls not only limit the amount and distribution of available resources for spotted owls within shared foraging areas, but also exclude spotted owls from historical nesting areas via interspecific territoriality (Wiens et al. 2014). Our study indicated that this combination of exploitation and interference competition from barred owls also results in increased breeding dispersal of spotted owls, as shown by an increasing annual probability of breeding dispersal in regions with an increasing occurrence of barred owls. Previous work has documented a negative effect of barred owl presence on spotted owl territory occupancy and detection probability (Olson et al. 2005, Pearson and Livezey 2007, Yackulic et al. 2019, Duchac et al. 2020), which could represent increased mortality or emigration. Additionally, Yackulic et al. (2014) found evidence that spotted owls were less likely to colonize areas already occupied by barred owls, supporting the hypothesis that barred owls reduce territory availability and/or quality for dispersing spotted owls. Increased occupancy of study areas by barred owls was associated with greater breeding dispersal distances for spotted owls in our study areas, suggesting

⁵³ Todd M. Wilson and Eric D. Forsman, *Thinning effects on spotted owl prey and other forest-dwelling small mammals*, In: Anderson PD, Ronnenberg KL, eds Gen. Tech. Rep. PNW-GTR-880. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 79-90 (2013).

that it has become more difficult for spotted owls to locate favorable habitat conditions (Jenkins et al. 2019a).⁵⁴

Forsman et al.'s 2011 report "Population Demography of Northern Spotted Owls" corroborates the need to protect more than just a subset of the highest quality northern spotted owl habitat as contemplated in Recovery Action 32:

We also found a negative relationship between recruitment rates and the presence of Barred Owls and a positive relationship between recruitment and the amount of suitable owl habitat in the study areas. Recruitment was higher on federal lands where the amount of suitable owl habitat was generally highest. [p 75] ...

While our observational results do not demonstrate cause–effect relationships, they provide support for the hypothesis that the invasion of the range of the Spotted Owl by Barred Owls is at least partly the cause for the continued decline of Spotted Owls on federal lands. Our results also suggest that Barred Owl encroachment into western forests may make it difficult to insure the continued persistence of Northern Spotted Owls (see also Olson et al. 2004). The fact that Barred Owls are increasing and becoming an escalating threat to the persistence of Spotted Owls does not diminish the importance of habitat conservation for spotted Owls and their prey. In fact, the existence of a new and potential competitor like the Barred Owl makes the protection of habitat even more important, since any loss of habitat will likely increase competitive pressure and result in further reductions in Spotted Owl populations (Horn and MacArthur 1972, Olson et al. 2004, Carrete et al. 2005). [p 76] ...

Our results and those of others referenced above consistently identify loss of habitat and Barred Owls as important stressors on populations of Northern Spotted Owls. In view of the continued decline of Spotted Owls in most study areas, it would be wise to preserve as much high quality habitat in late-successional forests for Spotted Owls as possible, distributed over as large an area as possible. This recommendation is comparable to one of the recovery goals in the final recovery plan for the Northern Spotted Owl (USDI Fish and Wildlife Service 2008), but we believe that a more inclusive definition of high-quality habitat is needed than the rather vague definition provided in the 2008 recovery plan. Much of the habitat occupied by Northern Spotted Owls and their prey does not fit the classical definition of "old-growth" as defined by Franklin and Spies (1991), and a narrow definition of habitat based on the Franklin and Spies criteria would exclude many areas currently occupied by Northern Spotted Owls. [p 77].⁵⁵

While the stands proposed for treatment in the Project are not yet late-successional forests, the proposed Project activities may impact important habitat features for the northern spotted owl in the short term, including available prey, canopy cover and snag recruitment which is

⁵⁴ Julianna M. A. Jenkins, Damon B. Lesmeister, Eric D. Forsman, Katie M. Dugger, Steven H. Ackers, L. Steven Andrews, Scott A. Gremel, Bruce Hollen, Chris E. McCafferty, M. Shane Pruett, Janice A. Reid, Stan G. Sovern, and David Wiens, *Conspecific and congeneric interactions shape increasing rates of breeding dispersal of northern spotted owls*, *Ecological Applications* 31(7):e02398. 10.1002/eap.2398 (2021).

⁵⁵ Eric D. Forsman, Robert G. Anthony, Katie M. Dugger, et al, *Population Demography of Northern Spotted Owls*, *Studies in Avian Biology* 40 (2011).

important for survival of the species in addition to long-term recruitment of late-successional forests. Overall, the impacts to northern spotted owl may be significant, thus warranting the preparation of an environmental impact statement.

Road Construction

Approximately 92 miles of system roads will receive maintenance or reconstruction work as part of the Project. Transportation Report at 1. An additional 7.1 miles of temporary roads will be constructed, of which 6.6 miles will be constructed on existing footprints of old roads and 0.5 miles will be new construction. PA at 2. The Project calls for all temporary roads and landings to be rehabilitated after use, which includes activities such as decompaction and storm proofing. *Id.* at 4. Road construction, reconstruction, and maintenance can have negative impacts on the environment, including through: soil disturbance, erosion, and compaction; pollution of streams through sedimentation and thermal loading; hydrological modification; impaired floodplain function; creating barrier to movement of dead wood and spawning gravel to aquatic habitat; reduced recruitment of snags and downed wood in terrestrial habitat; habitat fragmentation, and creation of vectors for weeds, human-caused fire ignitions, and litter. The Project PA does not analyze the negative impacts of proposed actions related to roads, and the Transportation Specialist Report describes only the short-term and long-term beneficial effects of road maintenance and reconstruction on existing system roads while completely avoiding any analysis of temporary roads. See Transportation Report at 4-6. The Forest Service must take a hard look at the environmental impacts associated with road maintenance and construction.

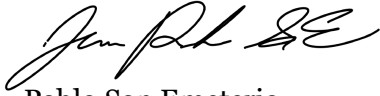
Temporary roads present a significant risk to the health of the environment. These roads are not temporary in effect, and can have lasting impacts well beyond the implementation of a project. One risk of temporary roads is an increase in fire occurrence, in direct contrast to the purposes of the Project. Several studies have found a strong positive relationship between wildfire ignitions and proximity to roads; and these studies all conclude that proximity to roads increases fire occurrence.⁵⁶ The Forest Service should avoid the construction of any temporary roads for the Project unless and until the Forest Service engages in a hard look at the environmental impacts of temporary road construction as proposed.

The Forest Service should also evaluate whether any roads in the Project area are suitable for closure, decommissioning, and storage. The National Forest road system is overburdened, and there is an existing backlog of required road maintenance required to improve safety and environmental protection. By closing or decommissioning roads in the Project area, the Forest Service would both reduce the backlog of deferred road maintenance while also reducing the negative impacts of roads on the environment.

Thank you for considering these comments for the Anvil Project.

⁵⁶ Gregory H. Aplet, Phil Hartger, and Matthew S. Dietz, *Three-decade record of contiguous-U.S. national forest wildfires indicates increased density of ignitions near roads*, Fire Ecology 22:8 (2026).

Sincerely,

A handwritten signature in black ink, appearing to read "Pablo San Emeterio".

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