Vancouver Audubon

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submitted electronically via webportal

RE: Northwest Forest Plan Amendment Draft Environmental Impact Statement Comments

Dear Ms. Buchanan:

The Vancouver Audubon Society is a non-profit chapter of the National Audubon Society. Our members live in Clark, Skamania and Klickitat counties in Washington state. For 50 years, we have worked to protect birds and the places they need using science, advocacy, education, and on-the-ground conservation. By "bending the bird curve," we are working to help halt, and ultimately reverse, the decline of birds across the Americas.

Vancouver Audubon has worked for decades to protect birds on the Gifford Pinchot National Forest, including keeping records of bird species present on field trips and advocating for conservation of their habitats, so we are interested in this proposal to amend the Northwest Forest Plan (NWFP).

Although imperfect, the 1994 NWFP has protected mature and old-growth forests and their fish and wildlife on federal lands throughout the Pacific Northwest for 30 years. The plan is a model for science-based landscape-scale ecosystem management to conserve rare species, including the unprecedented success of the Aquatic Conservation Strategy. It set strong standards for restoring forests that had previously been logged while also setting more sustainable logging levels compared to the prior intensive management era. It halted the decimation of mature forests and the liquidation of the remaining old-growth forests.

We are providing comments on the Northwest Forest Plan Amendment Draft Environmental Impact Statement (DEIS). We had hoped that the proposed amendment would correct one of the

major flaws in the NWFP: the protection of mature and old-growth forests that were not included in the Late Successional Reserves (LSRs) and still are available for logging in the Matrix. "Every acre of mature and old-growth forest on federal lands, including when those areas eventually burn or are reset by natural disturbances, must be protected in perpetuity. Because the vast majority of old-growth forests were hauled off the landscape in logging trucks, we must now protect all remaining old growth trees."[1]

Flaws in the Proposed Action

The DEIS analyzes four alternatives, including the proposed action (Alternative B.)

As we will explain below, we oppose these elements of the proposed action:

- Redefine "mature" and "old-growth" forests by raising the age class of stands that qualify for protection from logging and providing broad exceptions for logging in old-growth forests.
- Increase aggressive logging on Matrix (non-reserve) lands
- Creating young forest in LSRs.
- Allow logging in LSRs for purposes beyond old-growth restoration.
- Expand logging in dry East Cascades forests.

The proposed action abandons the NWFP's purpose to "conserve mature and old-growth ecosystems and habitat for the conservation of northern spotted owl and other species, protect riparian areas and waters, and provide a sustainable supply of timber and non-timber forest products." The northern spotted owl and other Endangered Species Act (ESA) listed species have not recovered and some are even closer to extirpation now than they were in 1994. Failure to recover sustainable populations of these species lies in the federal agencies doing too little under the plan by managing for minimum habitat conservation.

The DEIS identified five "Needs" in the Purpose and Need for Action (p. ES-2). The proposed action is intended to best address the purpose and need(s) for action.

Need 1: Improving wildfire resistance and resilience across the NWFP area

Climate change is increasing wildfire activity from all sources of ignition, and a fire deficit from prohibition of Indigenous cultural burning, lack of prescribed burning, and systematic fire suppression has caused fuels accumulation and increased forest density that is increasing the size, frequency, and intensity of wildfires.

The proposed action relies on a flawed justification that logging and thinning in mature west-side moist forests will reduce wildfire risk. Fire frequency intervals in moist Pacific Northwest forests remain relatively long despite some recent west-side fires. Moreover, fire severity is predominantly low to moderate with high severity fire remaining relatively rare[2]. Few fires

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[1] Schenck, Rand. *Forest Under Siege: The Story of Old Growth After Gifford Pinchot*. Pullman, (WA): Basalt Books, 2024, p. 196 quoting Dominick DellaSala et al., "Building on Two Decades of Ecosystem Management and Biodiversity Conservation under the Northwest Forest Plan, USA," *Forests* 6, no. 9 (2015): 3326-3352.

[2] Donnegan, Joseph; Campbell, Sally; Azuma, Dave, tech. eds. 2008. Oregon's forest resources, 2001–2005: five-year Forest Inventory and Analysis report. Gen. Tech. Rep. PNW-GTR-765. Portland, OR: U.S. Forest Service, Pacific Northwest Research Station. 186 p. http://www.fs.fed.us/pnw/publications/gtr765/pnw-gtr765b.pdf

actually encounter a prescribed burn when they might effectively influence fire spread and severity. Some estimates put fire encounters with burned areas at less than one percent. Prescribed fires to reduce fire severity can only occur if wildfires encounter such burned landscapes. Since the Forest Service cannot reliably predict where and when a wildfire will occur, fuel treatments, like logging and thinning, intended to modify fire behavior must be extensive and permanent. This is not logistically, economically or environmentally feasible, particularly in LSRs, where it would have broad negative impacts on many forest species, particularly closed-canopy dependent species like the northern spotted owl and marbled murrelet. It also ignores the importance of understory forest structure to many bird species, including fledgling northern spotted owls. The LSR system was designed to be robust in anticipation of losses to wildfire.

Current science indicates that forests with historically long fire frequency intervals, like western Washington moist forests, do not suffer as a result of fire suppression and will not benefit from fuel reduction[3]. Indeed, fire severity may be reduced by forest growth and the absence of fire. Scientists have found over 30 years of study that under moist forest conditions, the microclimate in interior patches of suitable spotted owl nesting forest likely mitigated fire severity and thus functioned as fire refugia, burning at lower severity than the surrounding landscape. Older forests can dampen the effects of increased wildfire activity and be an important component of landscapes with fire resiliency.[4]

As time passes and forests grow, canopy closure increases cooling of the microclimate and reducing growth of hazardous understory ladder fuels[5],[6]. Additionally, tree bark thickens and roots grow deeper providing stronger fire resistance in individual trees.

Most plant communities existed for millions of years before humans colonized North America, so it is absurd to suggest they now need human ignition to be healthy. Many cultural burning advocates argue, however, that humans must burn these forests to keep them "healthy." That begs the question of how forests survived over millions of years before any humans were present on the North American continent.

Most research suggests such cultural blazes were localized in their influence. They did not significantly influence plant and animal communities at a landscape or evolutionary level. We have plenty of evolutionary evidence for this since many plant communities have no unique

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[3] Agee, J.K., and R.L. Edmonds. 1992. Forest protection guidelines for the northern spotted owl. In Recovery Plan for the Northern Spotted Owl: Appendix F. USDI Fish and Wildlife Service. Washington, D.C

[4] Lesmeister, Damon B. et al. "Northern spotted owl nesting forests as fire refugia: a 30-year synthesis of large wildfires." *Fire Ecology* (2021) 17:32.

[5] Odion, D.C., E.J. Frost, J.R. Strittholt, H. Jiang, D.A. DellaSala and M.A. Moritz. 2004. Patterns of fire severity and forest conditions in the western Klamath Mountains, California. Conservation Biology 18(4): 927-936. http://nature.berkeley.edu/moritzlab/docs/Odion_etal_2004.pdf

[6] Vickers, D., Thomas, C. K., Pettijohn, C., Martin, J. G., & Law, B. E. 2012. Five years of carbon fluxes and inherent water-use efficiency at two semi-arid pine forests with different disturbance histories. Tellus B, 64, 17159. https://doi.org/10.3402/tellusb.v64i0.17159

adaptation to fire and typically have long fire rotations. Frequent fire degrades or destroys these vegetative communities.[7]

Meanwhile, high-severity wildfires provide a habitat type that frequent fire does not produce—snag forests. Snags are may be as crucial as old-growth trees. Many species of plants and animals, particularly birds, are only found in or are more abundant in snag forests.
Climate conditions, not fuels, drive wildfires. All large wildfires are climate and weather-driven events: severe drought, high temperatures, low humidity, and, most importantly, high winds, result in unstoppable blazes.

Salvage logging of fire-killed trees in western forests has been shown to impact many wildlife species, including breeding birds. Studies show that fire-adapted bird communities respond negatively to salvage logging, including: black-backed woodpecker, hairy woodpecker, lazuli bunting, MacGillivray's warbler, olive-sided flycatcher, house wren, mountain chickadee, red-breasted nuthatch, brown creeper, western tanager, hermit warbler, yellow-rumped warbler and Cassin's vireo. None of the strategies for arranging timber salvage activity or intensity completely mitigated the negative impacts.[8]

Also, "fuels reduction" logging, especially when targeting canopy trees, can actually increase the wildfire hazard since opening up the forest canopy makes stands hotter, drier, and windier and stimulates the growth of understory ladder fuels. Yet, this is just what the proposed action would do in moist forests to "create wildfire resistance and resilience." Language referring to "fire resistance" should be used only in reference to structures in the human-built environment. It is ecologically inappropriate to apply it to fire-dependent species and fire-adapted ecosystems.

The proposed action disguises logging as fuel reduction and forest health projects, hiding the detrimental effects of logging on biodiversity, carbon emissions, and community safety. It is simply impossible to prevent or suppress all fires on the landscape. Fuels management should be guided by goals for restoring fire resilience rather than furthering fire suppression or timber extraction. They should be targeted treatments as part of a strategic fuels management program that focuses on protecting communities and mitigating fire hazards of young plantations.

We advocate for prioritizing home hardening and defensible spaces over the widespread logging in the proposed action. Home hardening recognizes that most structures ignite from embers rather than a wall of flames. Radiant heat also ignites homes, with the heat from a neighbor's house causing the ignition of adjacent structures. A burning home puts out far more radiant heat than a wind-driven wildfire. A hardened home has a non-flammable roof and covered vents, non-flammable decks and steps, and sealed doors and windows.

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[7] Wuerthner, George. The Good Fire-Bad Fire Myth. *The Wildlife News*. [https://www.thewildlifenews.com/2024/09/11/the-good-fire-bad-fire-myth/: accessed 14 February 2024]

[8] Fogg, Alissa M. et al. "Short-term effects of post-fire salvage logging intensity and activity on breeding birds in the Sierra Nevada Mountains, USA." *Fire Ecology* (2022) 18:20.

The proposed action should be managing wildfires with ecological fire use across the widest possible land base, instead of routinely "fighting" them with aggressive suppression. Systematic fire suppression in economically and ecologically unsustainable. Using alternative ecological fire use strategies and tactics when conditions for desired fire behavior and fire effects are optimal will maximize the social and ecological benefits of burning while minimizing their potential adverse effects. A more strategic and selective approach to fire suppression would be to focus it on frontcountry communities which absolutely cannot tolerate fire, and then implement ecological fire use tactics in backcountry wildlands which generally require more fire.

Fire inclusion should include education that guides public acceptance for the safe, ethical, ecological use of beneficial fire in fire-adapted forest ecosystems.

Need 2: Strengthening the capacity of NWFP ecosystems to adapt to the ongoing effects of climate change

Mature and old-growth forests are key to adapting to climate change. It is well known that forests play a crucial role in mitigating climate change by absorbing large amounts of carbon dioxide from the atmosphere. Carbon storage in forests occurs when trees absorb carbon dioxide from the atmosphere through photosynthesis, storing the carbon within their biomass (leaves, branches, trunk, roots) and also within the forest soil, effectively acting as a "carbon sink" by removing carbon from the air and holding it in the ecosystem.

Old-growth, unmanaged forests offer exceptional carbon storage capacity. They accumulate carbon for centuries and contain large quantities of it. Much of this carbon, including soil carbon, will move back to the atmosphere if the forest is disturbed. "We find that in forests between 15 and 800 years of age, net ecosystem productivity (the net carbon balance of the forest including soils) is usually positive. Our results demonstrate that old-growth forests can continue to accumulate carbon."[9]

The most economic and effective systems to sequester and store carbon are natural climate solutions "invented" long before humans walked the Earth. Young trees grow fast, but old trees store a disproportional amount of carbon. Trees share carbon with one another through below ground fungal networks, and even give extra carbon to their own offspring. Old forest carbon is "irrecoverable," meaning it is vulnerable to release upon logging and, once lost, is not recoverable on timescales relevant to avoiding dangerous climate impacts.[10]

The aggressive logging in the preferred action is antithetical to strengthening the forest's capacity to adapt to the ongoing effects of climate change. The preferred action should prioritize conserving old-growth forests and managing for resilience rather than actively manipulating the forest structure.

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[9] Luyssaert, Sebastiaan et al. "Old-growth forests as global carbon sinks." *Nature* (2008) 455: 213–215.

[10] Anderson, Mark G. "Wild Carbon: A Synthesis of Recent Findings on Carbon Storage in Old Forests." I*nternational Journal of Wilderness* (2021) 27:3.

Need 3: Improving conservation and recruitment of mature and old-growth forest conditions, ensuring adequate habitat for species dependent upon mature and old-growth ecosystems and supporting regional biodiversity

Less than 13% of the original old-growth in the Pacific Northwest remained in 1990[11] and it was ecologically fragmented into numerous smaller blocks rather than large intact areas. The main goal of the NWFP should be to grow and sustain more mature and old-growth forests.

The proposed action would increase the age when trees or forests are protected from logging from 80 years to 120 years in moist forests in the proposed action and to 150 years in dry forests. This change would have dramatically negative impacts on closed-canopy ESA listed species. In general, opening up the canopy will change the forest microclimate, shift predator dynamics and cause other impacts that will lead to already imperiled species to decline even more rapidly and increase chance of extinction both locally and regionally. There is a current shortage of mature and old-growth forests and many closed-canopy species remain threatened. All remaining mature and old-growth forests need to be conserved.

If and when wildfires burn within LSRs, salvage logging should be prohibited in order to protect the biological legacies (e.g. large snags and logs) within complex early seral forests, and to avoid further ground-disturbing actions that would cause long-term impacts on natural regeneration processes. The DEIS should disclose that natural regeneration in complex early seral stands is the only known proven method for reproducing mature and old-growth forests.

The DEIS should analyze and disclose the different fire regimes and fire ecology dynamics between moist and dry forests, but all proposed active forest management projects should be designed to protect and expand mature and old-growth forests. All mature and old-growth stands and individual large, old trees should be protected from logging wherever they are located. This includes protecting isolated mature and old-growth stands in matrix lands in moist westside forests, and individual mature and old-growth trees in dry forests. Firm diameter caps established in the "eastside screens" should be continued for fuels management or restoration projects proposing commercial logging or commercial thinning in dry forests, especially in stands where the legacy of past commercial logging has removed most or all mature and old-growth trees.

The proposed action conflicts with existing recovery plans for several species, including:

<u>Northern Spotted Owl</u>

The contemporary amount and spatial extent of suitable northern spotted owl nesting forest is a small percentage of what existed historically. The northern spotted owl is a specialist that has evolved to survive in mature and old-growth forests. The proposed logging, thinning, and associated road construction further fragments spotted owl nesting, foraging, and dispersal habitat. These activities will accelerate competition from the barred owl.[12] Examination of the increasing footprint of barred owls demonstrates that they follow humans and as generalists

[11] Schenck, p. 117.

[12] Long, L.L. and J.D. Wolfe. 2019. Review of the effects of barred owls on spotted owls. *Journal of Wildlife Management* 83(6): 1281-1296.

rapidly adapt to and overwhelm a changing landscape. High quality spotted owl nesting habitat has been shown to help buffer spotted owl populations from the impacts of barred owls.[13] Mixed- and high-severity wildfires have been shown to benefit more than decrease spotted owl foraging habitat. The proposed action should prioritize retention of high quality habitat but instead it conflicts with habitat needs of the northern spotted owl.

The Northern Spotted Owl Revised Recovery Plan calls for conservation of existing high-quality northern spotted owl nesting forest, and outside those areas, focused treatments to increase the extent of forest types with large diameter trees, high amounts of canopy cover, and decadence components such as broken-topped live trees, mistletoe, cavities, large snags and fallen trees.[14] The proposed action also conflicts with the Recovery Goal and Recovery Objectives, in particular Objectives #2 and #3.[15] Specifically, logging recommendations in the proposed action contradict Recovery Criterion #3 (Continued Maintenance and Recruitment of Spotted Owl Habitat) as well as "Conserve older stands that have occupied or high-value spotted owl habitat as described in Recovery Actions 10 and 32."

Marbled Murrelet

The marbled murrelet is a small seabird that forages in marine waters, but nests in old-growth forests. Population modeling efforts have concluded that the listed population exhibits a long-term downward trend, and has continued to do so since listing under the ESA. The NWFP goal to stabilize and increase marbled murrelet population sizes has not yet been achieved. It is unlikely that population numbers will increase rapidly due to the naturally low reproductive rate and the continued loss of nesting habitat. Recovery of the species is likely to take decades.[16]

The vast majority of murrelet nests occur in older-aged forests. The forest thinning projects in the proposed action will accelerate fracturing and opening of nesting habitat thus increasing damaging edge effects. Road building needed to carry out these projects will allow increased human access to critical habitat bringing increased risk of human caused wildfire and predation.

Pacific Marten

Extensive logging has caused significant effects on Pacific martens, including habitat loss and fragmentation, reduction of key habitat features like large live and dead trees, snags and downed logs which are essential for marten resting and denning sites, and increased predation risk from generalist predators like bobcats. Logging also can reduce the abundance of key prey species for martens by altering forest structure and composition. Fragmented landscapes can create marten dispersal barriers, reducing gene flow and increasing the risk of population isolation.[17]

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[13] Dugger, Katie. M., et al. 2016. The effects of habitat, climate, and barred owls on long-term demography of northern spotted owls. *Condor* 118:57–116.

[14] Lesmeister, "Northern spotted owl nesting forests as fire refugia: a 30-year synthesis of large wildfires."

[15] U.S. Fish and Wildlife Service. 2011. Revised Recovery Plan for the Northern Spotted Owl (Strix occidentalis caurina). U.S. Fish and Wildlife Service, Portland, Oregon. xvi + 258 pp.

[16] U.S. Fish and Wildlife Service. Marbled Murrelet. www.fws.gov/species/marbled-murrelet-brachyramphus-marmoratus: accessed 7 March 2025.

[17] Slauson, Keith.M., et al. 2019. A conservation assessment and strategy for the Humboldt marten in California and Oregon. Gen. Tech. Rep. PSW-GTR-260. Arcata, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research

Need 4: Incorporating Indigenous Knowledge into planning, project design, and implementation to achieve forest management goals and meet the Forest Service's general trust responsibilities

We fully support Tribal inclusion and co-stewardship projects but there is nothing preventing the Forest Service from doing so now. An environmental impact statement is not necessary to meet this need. Tribes have been seeking involvement in forest management to protect their treaty rights since the establishment of the Forest Service.

The Sawtooth Huckleberry Fields on the Gifford Pinchot National Forest are a prime example of long time neglect of trust responsibilities. "[I]n 1983, Yakama Nation leaders met with agency officials to discuss managing the Sawtooth fields and returning fire to the landscape…By 1994, still lacking fire and a long-term management plan, the Sawtooth fields had shrunk from 12,000 acres to 4,000 acres. The 2,800 acres originally protected by the Handshake Agreement within the Sawtooth fields decreased to about 700 acres...The Forest Service attempted a few small-scale tree removal projects with the Yakama Nation in the 1980s and '90s, 20 acres here and there, but the tree growth outpaced the agency's effort...The fields were estimated to be 1,500 acres, but of that, only 182 acres were still considered open berry fields. Around that time, the agency thinned about 1,100 acres using hand tools and contracted with a timber company to remove trees. And in 2011, after more than a century, the Forest Service, in collaboration with the Yakama Nation, burned 90 acres. A few smaller burns took place several years later. No other fields have burned since...'I wish we could do more (restoration) work that was just targeted at that," Hudec said, speaking of huckleberries. "Unfortunately, we have fallen short over the years in securing funds beyond the agency's timber management program.'"[18]

The proposed action contains wide-ranging components to advance Tribal inclusion in national forest management. Although this effort is unprecedented in a Forest Service decision-making process, and the DEIS represents remarkable improvement compared to the original NWFP, the current proposed amendment can and should be improved in response to public comments, particularly from Tribal entities.

The Forest Service should advance all of the Tribal inclusion components presented in the proposed action. The Final EIS needs to provide a more comprehensive analysis that reflects the breadth and importance of the proposed action components to Indigenous communities, and more accurately discloses the impacts of the proposed amendment on Tribes.

Need 5: Providing a predictable supply of timber and non-timber products and other economic opportunities to support the long-term sustainability of communities located proximate to National Forest System lands and economically connected to forest resource

The proposed action calls for overly aggressive, unsustainable logging that it suggests will increase fire resistance and fire resilience. Science shows it will do neither.

Station. 124 p. Available online at www.fs.fed.us/psw/.

[18] Woolington, Josephine. "The true cost of the huckleberry industry." *High Country News.* February 25, 2025.https://www.hcn.org/issues/57-3/the-true-cost-of-the-huckleberry-industry/?utm_source=wcn1&utm_medium=email&utm_campaign=2025-02-25-Newsletter: [accessed March 2, 2025].

Unsustainable logging will exacerbate problems associated with changing weather patterns. Increased commercial logging, heavily thinned stands, and wider roadbeds will result in more and larger areas that will be drier and hotter in summer than undisturbed stands. These open canopy areas will become increasingly predictable sites of wildfire ignition. Higher summer temperatures will trigger dormancy in the remaining trees, preventing them from growing larger and becoming more fire resistant. Since most wildfires are human caused, a more open landscape and the resulting increase in human activity will result in more frequent wildfires. These human initiated fires will invariably be closer to communities thus increasing threats to infrastructure, human lives and livelihoods.

Removing trees from the landscape eliminates their ability to regulate forest water cycles and provide year-round micro-climates needed as temperature refugia for wildlife. The proposed action gives too little attention to the rapidly warming atmosphere and the resulting change in weather patterns.

Fire resistance and resilience can be improved without increased logging. The Forest Service could meet this need under the current NWFP but has demonstrated an unwillingness to do so. Placing an emphasis on supporting rural economies through unsustainable extractive industry is the underlying failure that resulted in the need for the original NWFP. Advances in technology and automation mean that an aggressive return to get-out-the-cut management will invariably lead to even greater destruction of habitat at the hands of even fewer forest industry workers.

The NWFP must help guide a paradigm shift in forest management by recognizing broader and more sustainable socioeconomic benefits of forests for their carbon sequestration and storage capacity, and their role in providing numerous ecosystem services. The NWFP amendment should not be a means of "turning back the clock" to revive the former economic dominance of private timber corporations over rural communities around the Gifford Pinchot National Forest.

The proposed action should emphasize the emerging restoration and recreation-based economy over an extraction economy in rural communities. Transitioning from cutting trees for lumber to a focus on actively restoring and managing forests for ecological health could create new economic opportunities like reforestation, habitat restoration, carbon sequestration, and ecosystem services, while still potentially producing some timber sustainably.

For example, the mass timber market is a major change for the timber industry as it has shifted to small log milling. The shift to small logs promotes sustainability, drives economic growth, offers innovative construction solutions, enhances building performance, and provides aesthetic flexibility.[19]

The DEIS should disclose the current lack of logging and milling capacity, especially for processing large-diameter trees, and analyze the effects of this on prospects for implementing fuels reduction or forest restoration projects with commercial logging. The DEIS should address

[19] "How the Mass Timber Market is Vital for the Wood Manufacturing Industry." *TimeSavers*, July 23, 2024. https://timesaversinc.com/blog/how-the-mass-timber-market-is-vital-for-the-wood-manufacturing-industry/: accessed March 2, 2025.

the timber industry's desire for a "predictable supply of timber" by disclosing that, for the sake of climate recovery, biodiversity preservation, the emerging restoration and recreation-based economy, and long-term ecosystem sustainability, the supply of commodity timber on national forests is going to be predictably low.

The proposed action does not consider the adverse effects that increased logging would have on outdoor recreation, a major economic driver in the Pacific Northwest, supporting jobs and businesses, and generating tax revenue. Spending on outdoor recreation in Washington was $26.5 billion and supported 264,000 jobs in 2019. For every $1 dollar spent on outdoor recreation, $1.52 in economic activity was generated in the regional economy. Outdoor recreation contributed more than $20 billion to Washington's $610 billion GDP, approximately 3.2% of the state's total.[20]

This is a growing economic sector. Outdoor recreation in Washington increased 30 percent in the past five years, resulting in an increase in consumer spending. In 2019, Washington residents and tourists participated in nearly 600 million days of recreation outdoors, with 90 percent taking place on public lands, include hiking, biking, rock climbing, horseback riding, hunting, fishing, snowmobiling, camping, dirt biking, and using motorized vehicles.[21]

The proposed action also should focus on rural workforce development and expanding the number of jobs beyond traditional logging jobs. For example, the full range of fire management jobs should be included: surveying and monitoring fuels, fire planning, community fire preparation and education, home hardening and defensible spaces, fire suppression, manual cutting and controlled burning. Other non-timber jobs related to recreation, restoration, non-timber forest products, and other work should also be included in the analysis.

Beyond employment, Washington's public lands provide between $216 billion and $264 billion in environmental benefits. These benefits include aesthetic values, science and educational opportunities, food, air quality, water quality, climate stability, disaster risk reduction, soil retention, water supply, habitat, and recreational opportunities.[22]

Conclusion

In summary, we urge a return to the original scientific vision behind the NWFP: a restored, interconnected network of old forest reserves as a climate solution, fish and wildlife habitat and native forest ecosystem. As described in the preceding pages, we recommend these changes to the proposed action:

- Strengthen protections for mature and old-growth forests, including those outside of LSRs in a holistic approach to protecting all remaining old-growth and mature closed canopy forests in large forest blocks, restoring late-seral stage habitats and establishing

[20] Mojica, J. and Fletcher, A. 2020. Economic Analysis of Outdoor Recreation in Washington State, 2020 Update. Tacoma, WA: Earth Economics.

[21] Ibid.

[22] Ibid.

habitat connectivity forest-wide. Decades of protecting the absolute minimum habitat while allowing aggressive logging on federal, state and private lands has placed the northern spotted owl in the precarious position of risking extinction. Conserving and restoring older multi-layered forests across the range of the northern spotted owl will help the species to be resilient to future impacts of natural disturbances and climate change.

- Protect all mature and old-growth forests, including those in the Matrix.

- Prioritize recruitment of future mature and old-growth forests to restore ecosystems both within and outside of LSRs, including ecological restoration of previously logged areas in wetter forests, especially in 80-120-year-old stands.

- Maintain or expand protections for LSRs to allow natural ecological processes to occur unimpeded, ensure connectivity for wildlife, and support the recovery of threatened and endangered species.

- Remove guidelines for creating young forest in LSRs. Natural disturbances are expected to continue to create suitable amounts of complex early successional forest habitat in LSRs. Human intervention is unneeded.

- Change wildfire protection strategies to prioritize individual and community safety through proven measures like defensible spaces and home hardening instead of logging.

- Eliminate forest-wide fire management zones in moist forests. Fire management should only occur within the fire danger zone near communities and other human infrastructure. Fire hazard should be reduced within 300 feet of infrastructure, but outside of this "ignition zone" ecological goals should take priority.

- Change fuels reduction guidelines to specifically protect canopy trees. Removing canopy trees for fuels reduction, which has been done before in Oregon[23], degrades closed-canopy and late-successional habitat. This includes habitat for ESA listed species like the northern spotted owl as well as other sensitive species like the northern goshawk, Pacific fisher, pileated woodpecker, and other closed-canopy dependent species.

- Do not permit large scale fuel breaks that would significantly degrade habitat for many species, including the northern spotted owl.[24]

- Do not permit salvage logging of mature and old-growth forests after fires in order to recruit snags, downed logs and woody debris.

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[23] http://www.blm.gov/or/districts/roseburg/plans/collab_forestry/files/RSBRG_Collaborative_Forestry_Pilot.pdf

[24] USDA, USDI 1998. South Cascades Late Successional Reserve Assessment. http://www.fs.fed.us/r6/frewin/projects/lsr/227/

- Consult with Tribes and provide resources to support co-stewardship of first foods and other full participation in decision-making.

- Identify and prioritize all ecosystem services including outdoor recreation, water and air quality, climate stability, disaster risk reduction, soil retention, water supply and habitat, not just a predictable supply of timber and non-timber products, as the economic drivers to support adjacent communities.

Thank you for the opportunity to comment.

Sincerely,

Susan Saul
Conservation Chair