



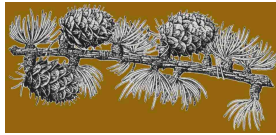
**EARTHJUSTICE**  
BECAUSE THE EARTH NEEDS A GOOD LAWYER



**KS Wild**  
Klamath-Siskiyou Wildlands Center



**AMERICAN BIRD CONSERVANCY**



**KALMIOPSIS**  
FRIENDS OF THE



**Western Watersheds Project**



**KALMIOPSIS AUDUBON SOCIETY**



**KLA MATH FOREST ALLIANCE**



**Corvallis, Oregon**



**PORTLAND AUDUBON**



**Lane County Audubon Society**



**Environmental Justice Program**



February 2, 2024

**Re: Notice of Intent for Northwest Forest Plan Amendment**

On behalf of the Environmental Protection Information Center, Center for Biological Diversity, Earthjustice, Klamath Forest Alliance, Cascadia Wildlands, Western Watersheds Project, American Bird Conservancy, WildEarth Guardians, Friends of the Kalmiopsis, The Larch Company, Klamath-Siskiyou Wildlands Center, Portland Audubon, Lane County Audubon Society, Audubon Society of Lincoln City, Kalmiopsis Audubon Society, Salem Audubon

Society, Audubon Society of Corvallis, Rogue Valley Audubon Society, Spokane Audubon Society, East Cascades Audubon Society, Alta Peak Chapter, California Native Plant Society, Catholic Charities of Stockton, CleanEarth4Kids.org, and the Trinidad Coastal Land Trust, please accept these comments on the Notice of Intent to prepare an environmental impact statement for Northwest Forest Plan (Plan) amendments.

In sum, the Plan is a success because it limited agency discretion and restricted logging within the range of the northern spotted owl. Thirty years into the implementation of the Plan, it appears that the Forest Service is considering amendments to loosen restrictions on commercial logging, particularly within the reserve network, with the goal of improving stand conditions to better adapt to global climate change and projected future fire severity. The ability to manage for fuel conditions, however, already exists within the Plan although with certain limitations to ensure that treatments are ecologically appropriate.

The history of the Northwest Forest Plan shows that the Forest Service has not always met its stewardship responsibilities which is why the Plan came about. Since implementation, the agency has chafed against some of the necessary restrictions imposed by the Plan, and used available discretion to continue logging the same mature and old-growth forests that the Plan sought to protect. Because of this history, our organizations are uncomfortable affording the Forest Service additional discretion and urge that the Plan be allowed to continue working.

Instead of loosening the Northwest Forest Plan, we ask that the Forest Service build upon its successes. We ask that the Forest Service adopt an alternative that:

1. Increases involvement of tribal governments over management decisions concerning their ancestral territory;
2. Protects and expands the existing reserve network, including in both dry and moist forest ecosystems;
3. Protects mature and old-growth trees in both the reserves and matrix and works in parallel with federal policy towards the identification and protection of mature and old-growth trees;
4. Rightsizes timber production expectations;
5. Includes management for in-forest carbon storage and sequestration;
6. Adopts species of conservation concern with an emphasis given to those with limited dispersal, sensitivity to management impacts, and climate change;
7. Adopts beaver restoration as a goal of the plan; and
8. Works towards lands conservation goals identified by state and federal “30x30” policies.

We look forward to engaging with the Forest Service and other federal and state partners through the development of forthcoming amendments.

## **I. Background**

The Northwest Forest Plan is a successful global model for biodiversity conservation and

ecosystem management.<sup>1</sup> At its inception, the Clinton Administration sought to better integrate ecological and economic concerns with Pacific Northwest forests by providing landscape level direction that spanned across multiple federal agencies to produce a plan that was “scientifically sound, ecologically credible, and legally responsible.”<sup>2</sup> These three goals “more than any other, guided development of the [Northwest Forest Plan] and...explain its influence and longevity. It truly provided the scaffolding on which the [Northwest Forest Plan] was built.”<sup>3</sup>

After federal courts established that the Forest Service and the BLM had failed to maintain adequate viability for species associated with late-successional forests, a multi-disciplinary team of scientists, the “Forest Ecosystem Management Assessment Team” or FEMAT, was assigned the task of developing management alternatives that would meet the goals of the plan and adhere to federal laws and court rulings. Of particular importance was the maintenance and development of well-distributed late-successional (mature and old-growth) forest reserves (LSRs) to provide habitat for viable populations of northern spotted owls, marbled murrelets, and over 1,000 late-successional species. This included the protection and restoration of spawning and rearing habitat for at-risk anadromous fish. Specifically, FEMAT was directed to produce management alternatives that would ensure population viability for at-risk species whose viability was below an 80% threshold.

Of the alternatives, President Clinton selected “Option 9” on the belief that this alternative would meet species viability requirements—which was necessary to survive judicial scrutiny—while anticipating the logging of approximately one billion board feet of mainly remnant old-growth in the so-called matrix lands.

Option 9 became the Northwest Forest Plan: a landscape-level planning effort that sought to unify federal lands towards biodiversity conservation and ecosystem management built on the solid principles of conservation biology: coarse filter reserves and additional fine-filter species level protections. The Plan was immediately litigated by a variety of plaintiffs. Judge Dwyer found that although the plan was legal as written, “[w]hether the plan and its implementation will remain legal will depend on future events and conditions.”<sup>4</sup>

In revisiting the Northwest Forest Plan, it is important to hold two sometimes seemingly contradictory truths in mind: the Plan is working, and the Plan needs amending. Amendments to the Plan should reflect the first principles that undergirded the 1994 Plan—scientifically sound, ecologically credible, and legally responsible—and stray from controversies that threaten to reopen old wounds that have only recently healed. The Notice of Intent produced by the Forest Service, however, undermines these first principles; it implies substantial changes that would enable more aggressive commercial logging, are clearly inconsistent with the original intent of the Plan, and are not based on best available science. Our organizations are concerned at the direction of proposed revisions and urge the Forest Service to seek a new direction in Plan

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<sup>1</sup> DellaSala, D.A., et al. 2015. Building on two decades of ecosystem management and biodiversity conservation under the Northwest Forest Plan, USA. *Forests* 6:3326-3352.

<sup>2</sup> FEMAT Report, July 1993 at ii.

<sup>3</sup> Johnson, K. Norman, et al. *The Making of the Northwest Forest Plan: The Wild Science of Saving Old Growth Ecosystems*. Oregon State University Press, 2023.

<sup>4</sup> *Seattle Audubon Society v. Lyons*, 871 F. Supp. 1291, 1300 (W. D. Wash. 1994), *aff'd*, 80 F.3d 1401 (9th Cir. 1996).

revisions.

## **II. The Northwest Forest Plan is Working**

### **1. All Ecological Indicators Have Been Increasing**

The Northwest Forest Plan was designed to be a 100-year plan. At roughly thirty years into the plan, ecologically and socially the Plan is working as intended. Ecologically, the Plan has broadly accomplished what it was designed to do: protect and develop late-successional forests; protect species closely associated with late-successional forest habitat; ensure that late-successional forests are well-distributed across the landscape in reserves; maintain habitat connectivity through the matrix; and protect and restore spawning and rearing habitat for anadromous fish and riparian and other habitat for aquatic organisms. It has had the added benefit of being a rare climate change success story by reducing carbon emissions<sup>5</sup> and retaining significant amounts of carbon across an entire region, with most of the carbon stored on federal lands being on those managed under the Plan.<sup>6</sup>

Regarding late-successional forests, the Plan has stemmed the loss of these forests on federal lands such that without the plan's protective standards and guidelines many late-successional forests in accessible areas would have been logged by this decade.<sup>7</sup> The Forest Service has observed that losses of older forests have been "small (a 2.8 to 2.9 percent net decrease)," with planned forest recruitment of late-seral forests over time in the reserve network helping to mitigate temporary losses from wildfire, logging, insects and other natural causes.<sup>8</sup> Late-successional forest protections have, in turn, blunted the impact of other less anticipated impacts to northern spotted owls from invasive barred owls; although that risk has been elevated by rapid expansion of the barred owl since the plan's development.<sup>9</sup> Additionally, while there has been an overall net loss of marbled murrelet habitat across its range, within lands governed by the Plan, and mainly in the reserve network, murrelet habitat increased by 2.93 percent; a net increase of 18,574 acres.<sup>10</sup> Thus, we cannot understate that the success story of the Plan is tied to the coarse scale (reserve network), fine scale (survey and manage) and other provisions that stem from fundamental principles of conservation biology that hold to this day, and are perhaps even more important today.

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<sup>5</sup> Krankina, Olga N., et al. "Carbon balance on federal forest lands of Western Oregon and Washington: the impact of the Northwest Forest Plan." *Forest Ecology and Management* 286 (2012): 171-182.

<sup>6</sup> Krankina, Olga N., et al. "High-biomass forests of the Pacific Northwest: who manages them and how much is protected?." *Environmental Management* 54 (2014): 112-121; Law, Beverly E., et al. "Land use strategies to mitigate climate change in carbon dense temperate forests." *Proceedings of the National Academy of Sciences* 115.14 (2018): 3663-3668.

<sup>7</sup> DellaSala, D.A., R. Baker, D. Heiken, C.A. Frissell, J.R. Karr, S.K. Nelson, B.R. Noon, D. Olson, and J. Strittholt. 2015. Building on two decades of ecosystem management and biodiversity conservation under the Northwest Forest Plan, USA. *Forests* 6:3326-3352.

<sup>8</sup> Northwest Forest Plan—The First 20 Years (1994-2013): Status and Trends of Late-Successional and Old-Growth Forests

<sup>9</sup> Franklin, Alan B., et al. "Range-wide declines of northern spotted owl populations in the Pacific Northwest: A meta-analysis." *Biological Conservation* 259 (2021): 109168.

<sup>10</sup> Lorenz, T.J.; Raphael, M.G.; Young, R.D.; Lynch, D.; Nelson, S.K.; McIver, W.R. 2021. Status and trend of nesting habitat for the marbled murrelet under the Northwest Forest Plan, 1993 to 2017. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 64 p.

Another clear success of the Plan is the related improvements to watershed integrity. For instance, the Plan has resulted in a slight overall increase in canopy cover (70-72%), recruitment of 80+ year old forests (57% in 1993 to 61% in 2017), and road removal (1,608 km (6.6% reduction), with associated improvements in water quality via declines in sediment delivery (4.0%) and landslide risk associated with roads (11%).<sup>11</sup> Despite these improvements many management indicators, such as increased large instream wood, are lagging because pre-Plan management reduced the availability of large logs that could be retained in streams. It's important to note that these losses are also much more significant on industrially logged private lands and thus the Plan is the best hope for restoring entire watersheds.

## **2. Probable Sale Quantity Was/Is Being Overstated**

While the Forest Service has not met its probable sale quantity anticipated under the Plan—a fact that is routinely used by antagonists of the Plan to conclude it was a “broken promise”<sup>12</sup>—this fails to recognize that our forests, our communities, and our economy have adapted and moved on and that the agency no longer has a social license to log mature and old-growth forests, even within the matrix. The Plan helped to drive economic diversification for once-timber dependent rural communities, creating new jobs in restoration and recreation. It is also notable that, in general, the Plan has produced a consistent supply of timber exemplified in part by such early adopters as the Siuslaw National Forest.

Several issues have yet to be factored into the Probable Sale Quantity (PSQ) that would likely lower it. These include the climate benefits of mature forest protection, and the northern spotted owl critical habitat rule of 2012 that has the effect of protecting high quality owl habitat in the matrix. Notably, spotted owl habitat has been recognized as important climate refugia as older forests tend to burn in lower fire severities<sup>13</sup> and offer climate sanctuaries through relatively cooler microclimates.<sup>14</sup>

As our needs for federal lands have evolved, so have our demands of the Plan. Socially, the Plan broke the impasse over forest management and helped to end the “Timber Wars” of the Pacific Northwest. While there are occasional flare-ups, the days of timber truck parades, threats, and violence have passed—so much so that the new generation of forest managers, who have grown up with the Plan, can look back in amazement that these ever existed.

In short, the Northwest Forest Plan is working. Amendments to the Plan should always keep this

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<sup>11</sup> Dunham, Jason; Hirsch, Christine; Gordon, Sean; Flitcroft, Rebecca; Chelgren, Nathan; Snyder, Marcia; Hockman-Wert, David; Reeves, Gordon; Andersen, Heidi; Anderson, Scott; Battaglin, William; Black, Tom; Brown, Jason; Claeson, Shannon; Hay, Lauren; Heaston, Emily; Luce, Charles; Nelson, Nathan; Penn, Colin; Raggon, Mark. 2023. Northwest Forest Plan—the first 25 years (1994–2018): watershed condition status and trends. Gen. Tech. Rep. PNW-GTR-1010. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 163 p. <https://doi.org/10.2737/PNW-GTR-1010>.

<sup>12</sup> See <https://naturalresources.house.gov/news/documentsingle.aspx?DocumentID=296313>

<sup>13</sup> Lesmeister, Damon B., et al. "Northern spotted owl nesting forests as fire refugia: A 30-year synthesis of large wildfires." *Fire Ecology* 17.1 (2021): 32.

<sup>14</sup> Wolf, Christopher, et al. "Temporal consistency of undercanopy thermal refugia in old-growth forest." *Agricultural and Forest Meteorology* 307 (2021): 108520.

fundamental truth in mind. That means building on the Plan by addition, not by subtraction: maintain all the Late Successional reserves (LSRs), protect all remaining older forests currently in the matrix, and prioritize ecological restoration to previously logged areas while redirecting fuels management to areas closest to homes.

### **III. The Northwest Forest Plan has Been Under Attack Since Its Inception**

Despite its success, the Northwest Forest Plan has been under attack since its inception, with attempts to limit conservation measures in the plan to commercially log the very same mature and old-growth forests that the plan was created to protect. These attacks came both from Congress, such as the 1995 Salvage Rider, which removed the ability to challenge timber sales under federal environmental laws, or budget cuts specifically to Survey and Manage, and from the Executive, including the Forest Service, such as the attempted rulemakings to pare back Survey and Manage and Aquatic Conservation Strategy measures.

What's more, because of our organizations' multi-decade work engaging at the local level on projects, we have seen how the Plan is subtly undermined by the Forest Service in an attempt to get out the cut. From these experiences, we understand the need to have clearly-articulated, objective rules because we have seen discretion abused to commercially log mature and old-growth forests within late-successional and riparian reserves.

In light of the history of attacks on the integrity of the Plan, conservation organizations such as ours are deeply concerned about further attempts to weaken the Plan's conservation measures.

### **IV. Need for Change**

While the Northwest Forest Plan has been a success, as our understanding of forest management improves and as our social uses and needs from public lands shift, so should our management strategies. Change, however, should be tempered by the reality that the Plan as written has created new settled expectations for forest management.

#### **1. Expand Tribal Involvement in Management of Ancestral Lands**

The Indigenous Peoples of the Pacific Northwest have lived in and have been integral to forests of the region since time immemorial. Colonization of the Pacific Northwest has not only dispossessed tribes of their land but it has also had profound effects on forest health. Particularly in fire-prone forests, settler land management practices—from plantation creation to fire exclusion—have exacerbated climate-driven forest fires.

The 1994 Plan was historic in its incorporation of Tribes in its development, its commitment to consultation with Tribes, and the Regional Ecosystem Office's continued tracking of the effects of the Plan on Tribes. The next amendment needs to go further. California has recognized the importance of tribal participation in land management decisions. In 2011, Governor Jerry Brown issued Executive Order B-10-11, directing California State agencies to permit tribal governments to provide "meaningful input" on decisions impacting native communities. In 2020, Governor Gavin Newsom further outlined California state policy by directing every state agency to

increase tribal involvement in management decisions impacting their ancestral territories. To both address historic wrongs committed by the United States against tribal nations and to help restore our region's forests, we urge the Forest Service to prioritize opportunities to expand tribal involvement for Tribes over their ancestral lands:

## 2. Protect Complex Early-Seral Forests

Fire is a natural feature of western forests, however, climate change and mismanagement of federal forests have resulted in increased fire activity. In the event of fire, it is important to ensure that post-fire activities do not disrupt natural successional processes that produce the biological legacies necessary to regenerate older forests over time.<sup>15</sup> The Northwest Forest Plan “gave vague and potentially conflicting guidance on protecting old trees and mature and old-growth forests during salvage.”<sup>16</sup>

In fire-adapted forests, post-fire logging, euphemistically called “salvage logging,” has become the dominant form of timber production. A drive to “salvage” merchantable timber with minimal environmental review will disrupt management of post fire renewal, especially in Riparian and LSRs, and produce serious impacts to water quality, soil health, wildlife, future wildfire risk, and forest succession.<sup>17</sup> While fires may produce fuel loading concerns in dry forest stands, the nature of commercial post-fire logging typically results in worsened fire conditions by removing large-diameter snags, which are the type likely to persist on the landscape for the longest period of time, while leaving significant residual fine fuels and jackpots of logging slash.

Post-fire logging is also associated with plantation creation and other interventions that work to undermine fire-resilient forests. Many species require the ephemeral environments produced by high-severity fire, including transitional, early-successional species.<sup>18</sup> Artificial regeneration often requires release of competing vegetation, impacting the value of post-fire ecosystems.

Post-fire timber sales have also been a particular source of litigation, as the Forest Service has attempted to expand logging in LSRs, Riparian Reserves, northern spotted owl Critical Habitat, and other ecologically sensitive areas. As one law review article notes, “As wildfire continues to affect old-growth forests within the range of the northern spotted owl, if the government continues to convince courts not to enjoin salvage sales on the unproven ground salvage logging helps prevent future wildfires, the integrity and viability of the [Northwest Forest Plans]’s [Late Successional Reserve] network will be undermined.”<sup>19</sup>

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<sup>15</sup> Donato, Daniel C., John L. Campbell, and Jerry F. Franklin. "Multiple successional pathways and precocity in forest development: can some forests be born complex?." *Journal of Vegetation Science* 23.3 (2012): 576-584.  
Swanson, M.E. et al. 2011. The forgotten stage of forest succession: early-successional ecosystems on forested sites. *Frontiers in Ecology and Environment* 9:117-125 doi:10.1890/090157

<sup>16</sup> Johnson, K. Norman, et al. *The Making of the Northwest Forest Plan: The Wild Science of Saving Old Growth Ecosystems*. Oregon State University Press, 2023.

<sup>17</sup> Lindenmayer, David B., Philip J. Burton, and Jerry F. Franklin. *Salvage logging and its ecological consequences*. Island Press, 2012; Georgiev, Kostadin B., et al. "Salvage logging changes the taxonomic, phylogenetic and functional successional trajectories of forest bird communities." *Journal of Applied Ecology* 57.6 (2020): 1103-1112.

<sup>18</sup> Swanson, M.E. et al. 2011. The forgotten stage of forest succession: early-successional ecosystems on forested sites. *Frontiers in Ecology and Environment* 9:117-125 doi:10.1890/090157

<sup>19</sup> Blumm, Michael C., Susan Jane M. Brown, and Chelsea Stewart-Fusek. "THE WORLD'S LARGEST ECOSYSTEM MANAGEMENT PLAN." *Environmental Law* 52.2 (2022): 151-216.

Regardless of land classification, our organizations urge the Forest Service to impose further restrictions on commercial post-fire logging to ensure that large fire-killed trees and large live trees are preserved on the landscape to help create more complex early-seral ecosystems. In wet forests, salvage logging should be wholly forbidden except for issues of public safety, such as hazard trees along important roads. In dry forests, salvage logging should prohibit the removal of large-diameter snags and prohibit the consideration of potential revenue in planning decisions. The Forest Service should also not only meaningfully consider the impacts of post-fire logging on fire-dependent species, like black-backed woodpeckers, that utilize the ephemeral habitats produced by high-severity wildfires, but should also extend meaningful protection to complex early seral forests. Lastly, we urge the Forest Service to favor natural regeneration and eschew artificial regeneration, which contributes to over-dense “reforestation” and disregards important transitional habitat types.<sup>20</sup>

### **3. Plan for the Retention and Recruitment of Late-Successional Forests Across the Northwest Forest Plan Area**

The Pacific Northwest’s late-successional forests are a public trust benefit to be held and protected for current and future generations. The Biden Administration has recognized the importance and rarity of mature and old-growth forests through a nationwide directive to define and inventory these forests, conduct a threats assessment, and to develop “climate-smart management and conservation strategies that address threats to mature and old-growth forests on Federal lands.”<sup>21</sup> Published research along with federal inventories have now provided updated information for the inventory; the next step is to protect those forests from threats, including anthropogenic threats from logging, arson, and inappropriate management, in rulemaking and forest plan revisions.<sup>22</sup>

The Plan is successful in retaining and creating late-successional forests because it provides clear and explicit protections for older forests through LSRs and other provisions. The principal threat to older forests is the matrix land allocation. LSRs must be retained and expanded across much of the landscape with robust protections held in place to ensure management actions protect and enhance conditions of late-successional and old-growth forest ecosystems. Other potential work in LSRs, such as ecological restoration involving killing some small trees and using prescribed and cultural burns, and creating open old forest conditions favored by some old-growth associated wildlife, must be conditioned on clear standards to ensure that the activities are consistent with the development and maintenance of late-successional conditions.

While wildfires have temporarily replaced a significant amount of old-growth forests with

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<sup>20</sup> Donato, D. C., et al. "Post-wildfire logging hinders regeneration and increases fire risk." *Science* 311.5759 (2006): 352-352.

<sup>21</sup> Strengthening the Nation’s Forests, Communities, and Local Economies (E.O. 14072)

<sup>22</sup> DellaSala, D.A., Mackey, B., Norman, P., Campbell, C., Comer, P.J., Kormos, C.F., Keith, H., Rogers, B. 2022. Mature and old-growth forests contribute to large-scale conservation targets in the conterminous United States. *Frontiers in Forests and Global Change*. 5: 979528; Birdsey, R.A., D.A. DellaSala, W.S. Walker, S.R. Gorelik, G. Rose, and C.E Ramirez. 2023. Assessing carbon stocks and accumulation potential of mature forests and larger trees in U.S. federal lands. *Frontiers in Forests and Global Change*.



complex early seral forests,<sup>23</sup> these forests are themselves a fire strategy, as the forest conditions in older forests and even recently burned ones help to moderate fire behavior.<sup>24</sup> As climate-driven fires are expected to increase wildfire activity in the future, it is imperative to plan for further recruitment of late-successional forests over time. Necessary to achieving this goal are clear standards to protect large-diameter trees and complex forest features associated with older forests in general.

Late-successional forest and intact forests are also an important nature-based strategy to combat the climate crisis.<sup>25</sup> The NOI too narrowly frames the Forest Service's obligation towards the land as "Strengthening the capacity of NWFP ecosystems to adapt to the ongoing effects of climate change." West Coast forests can also play a positive, mitigating role in our nation's efforts to address the climate crisis by sequestering and storing carbon over long periods. Mature forests in particular have been proposed as climate refugia because their anticipated refugia properties are far superior than logged areas.

Proforestation is the practice of protecting existing forests to foster continuous growth, carbon accumulation, and structural complexity.<sup>26</sup> The Northwest Forest Plan has unwittingly engaged in proforestation through the protection and recruitment of mature and old-growth forests over time. Revisions to the Plan offer opportunities for new protections for high-carbon forests to grow and safely sequester carbon. Managing for natural carbon sequestration and long-term carbon storage through the development of mature and old-growth forests is consistent with the historic management objectives of the Plan. Research indicates that the rate of carbon accumulation will continue to rise as a tree grows older and larger.<sup>27</sup> As one study concluded: "[L]arge, old trees do not act simply as senescent carbon reservoirs but actively fix large amounts of carbon compared to smaller trees; at the extreme, a single big tree can add the same amount of carbon to the forest within a year as is contained in an entire mid-sized tree."<sup>28</sup> Our organizations urge the Forest Service to prioritize the protection of all mature forests and large trees  $\geq 80$  years old across federal ownerships.

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<sup>23</sup> Swanson, M.E. et al. 2011. The forgotten stage of forest succession: early-successional ecosystems on forested sites. *Frontiers in Ecology and Environment* 9:117-125 doi:10.1890/090157. (Assuming such forests are not simplified by post-disturbance logging and artificial planting.)

<sup>24</sup> Lesmeister, Damon B., et al. "Northern spotted owl nesting forests as fire refugia: A 30-year synthesis of large wildfires." *Fire Ecology* 17.1 (2021): 32; Barredo, J.I., Mansuy, N. and Mubareka, S.B., Primary and old-growth forests are more resilient to natural disturbances – Perspective on wildfires, European Commission, 2023, JRC133970.

<sup>25</sup> DellaSala, D.A., Mackey, B., Norman, P., Campbell, C., Comer, P.J., Kormos, C.F., Keith, H., Rogers, B. 2022. Mature and old-growth forests contribute to large-scale conservation targets in the conterminous United States. *Frontiers in Forests and Global Change*. 5: 979528; Moomaw, William R., Susan A. Masino, and Edward K. Faison. "Intact forests in the United States: Proforestation mitigates climate change and serves the greatest good." *Frontiers in Forests and Global Change* 2 (2019): 27.

<sup>26</sup> Moomaw, William R., Susan A. Masino, and Edward K. Faison. "Intact forests in the United States: Proforestation mitigates climate change and serves the greatest good." *Frontiers in Forests and Global Change* 2 (2019): 27.

<sup>27</sup> Mildrexler, David J., et al. "Large trees dominate carbon storage in forests east of the cascade crest in the United States Pacific Northwest." *Frontiers in Forests and Global Change* (2020): 127; Mildrexler, David J., et al. "Protect large trees for climate mitigation, biodiversity, and forest resilience." *Conservation Science and Practice* (2023): e12944.

<sup>28</sup> Stephenson, Nathan L., et al. "Rate of tree carbon accumulation increases continuously with tree size." *Nature* 507.7490 (2014): 90-93.

#### **4. Rightsize Timber Production Expectations**

The Notice of Intent rightly identified the need for additional “clarity...regarding timber and non-timber opportunities.” The inability to meet the probable sale quantity anticipated by planners of the Northwest Forest Plan has been one of the most common critiques of the Plan by the timber industry. As others have recognized, the initial 1.2 billion board foot estimate was unreasonable from the outset<sup>29</sup> and quickly lowered after additional analysis. Timber production across the Pacific Northwest has generally declined, both on federal and non-federal lands, owing to a number of market forces. The Plan has been instrumental in helping the timber market shift to a more sustainable footing, from primarily generating board feet from mature and old-growth logging to an emphasis on small-diameter timber from thinning overstocked plantations.<sup>30</sup>

We urge the Forest Service to change tracking metrics from timber production to acres treated, removing any anticipated timber production from the plan, or alternatively, right-size timber production expectations based on more realistic and modern constraints on production.

#### **5. Biodiversity Protection**

The Northwest Forest Plan has been vital in preserving biodiversity, particularly species associated with late-seral forest ecosystems. The success is traceable to its foundations in conservation biology, particularly its adoption of a coarse filter of reserves protecting rare and at-risk habitats and a fine filter, through survey and manage requirements, protecting species outside of reserves. The Aquatic Conservation Strategy (“ACS”)—one of the most successful components of the plan—incorporates both coarse and fine filters to restore and maintain the health of Plan-area watersheds.

##### **a. Coarse Filters**

First, to the coarse filter, our organizations urge the preservation of fixed reserves as a necessary component of biodiversity conservation. The 2012 Planning Rule directs that forthcoming amendments “must include plan components...to maintain or restore the ecological integrity” and “diversity of ecosystems and habitat types throughout the plan area.”<sup>31</sup> This ecosystem protection provides a coarse filter to ensure the viability of a diversity of species across the Plan area.

The reserve network is foundational to the success of the Plan and changes should be made to better complement existing reserves, rather than a retreat towards a “whole landscape management” approach.

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<sup>29</sup> Spies, Thomas A., et al. "Twenty-five years of the Northwest Forest Plan: what have we learned?" *Frontiers in Ecology and the Environment* 17.9 (2019): 511-520; Blumm, Michael C., Susan Jane M. Brown, and Chelsea Stewart-Fusek. "THE WORLD'S LARGEST ECOSYSTEM MANAGEMENT PLAN." *Environmental Law* 52.2 (2022): 151-216.

<sup>30</sup> Johnson, K. Norman, et al. *The Making of the Northwest Forest Plan: The Wild Science of Saving Old Growth Ecosystems*. Oregon State University Press, 2023.

<sup>31</sup> 36 CFR § 219.9.

Recognition of in situ conservation of fixed reserves has been widely regarded as fundamental to conservation biology and ecosystem management approaches,<sup>32</sup> including the Northwest Forest Plan<sup>33</sup>. In a recent global synthesis, Watson et al. (2014) indicate that for most of the time, well-managed protected areas reduce rates of habitat loss in both terrestrial and marine systems and that there is “strong evidence that protected areas maintain species population levels (including threatened species) better than other management approaches.”<sup>34</sup> They further indicate that well-managed protected areas provide critical ecosystem services such as water, carbon, food security, protection of wild relatives of crops, and maintenance of wild stocks. And protected areas—particularly in carbon dense forests<sup>35</sup>—are now seen as a critical component of global climate change mitigation efforts because protected intact forests store more carbon than logged forests.<sup>36</sup>

Thus, Watson et al. (2014)<sup>37</sup> conclude that:

Although there is strong global consensus within the conservation community that the principal role of protected areas is nature conservation, in practice they are expected to make much wider ecological, social and economic contributions to human society. We submit that the socio-economic contributions come largely from the ecosystem services values that protected forests provide for people and that needs to be properly evaluated in any socioeconomic discussion of protected areas given the ecosystem services losses associated with valuing one particular service—timber—over another.

The concept of large contiguous reserves interconnected at landscape and regional scales remains fundamental to reserve design strategies across all conservation designs.<sup>38</sup>

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<sup>32</sup> Watson, J.E.M., N. Dudley, D.B. Segan, and M. Hockings. 2014. The performance and potential of protected areas. *Nature* 515:67-73.

<sup>33</sup> Courtney, S.P et al. 2004. Scientific evaluation of the status of the northern spotted owl. Sustainable Ecosystems Institute, Portland, Oregon; DellaSala, D.A., R. Baker, D. Heiken, C.A. Frissell, J.R. Karr, S.K. Nelson, B.R. Noon, D. Olson, and J. Strittholt. 2015. Building on two decades of ecosystem management and biodiversity conservation under the Northwest Forest Plan, USA. *Forests* 6:3326- 3352

<sup>34</sup> Watson, J.E.M., N. Dudley, D.B. Segan, and M. Hockings. 2014. The performance and potential of protected areas. *Nature* 515:67-73.

<sup>35</sup> Krankina, O., D.A. DellaSala, J. Leonard, and M. Yatskov. 2014. High biomass forests of the Pacific Northwest: who manages them and how much is protected? *Environmental Management*.

54:112-121; Mackey B., D. A. DellaSala, C. Kormos, D. Lindenmayer, N. Kumpel, B. Zimmerman; S. Hugh, V. Young, S. Foley, K. Arsenis, and J. Watson. 2014. Policy options for the world’s primary forests in multilateral environmental agreements. *Conservation Letters* 8:139-147 DOI: 10.1111/conl.12120.

<sup>36</sup> Krankina, O., D.A. DellaSala, J. Leonard, and M. Yatskov. 2014. High biomass forests of the Pacific Northwest: who manages them and how much is protected? *Environmental Management*. 54:112-121.

<sup>37</sup> Watson, J.E.M., N. Dudley, D.B. Segan, and M. Hockings. 2014. The performance and potential of protected areas. *Nature* 515:67-73.

<sup>38</sup> Noss, R.F., and A.Y. Cooperrider. 1994. *Saving nature’s legacy*. Island Press: Washington, D.C.; Noss, R.F.; Dobson, A.P.; Baldwin, R.; Beier, P.; Davis, C.R.; DellaSala, D.A.; Francis, J.; Locke, H.; Nowak, K.; Lopez, R.; et al. *Bolder thinking for conservation*. *Conserv. Biol.* 2012, 26, 1–4; DellaSala, D.A., R. Baker, D. Heiken, C.A. Frissell, J.R. Karr, S.K. Nelson, B.R. Noon, D. Olson, and J. Strittholt. 2015. Building on two decades of ecosystem management and biodiversity conservation under the Northwest Forest Plan, USA. *Forests* 6:3326- 3352; Lindenmayer, D.B., and J.F. Franklin. 2008. *Conserving forest biodiversity: a comprehensive multi-scaled approach*. Island Press, Washington, D.C.

In amendments to the Plan, the Forest Service should expand reserves and other conservation measures to improve landscape connectivity. Since the Plan's adoption, our understanding of landscape connectivity has improved as have tools for predicting and mapping connectivity corridors. Both broad-scale and fine-scale connectivity analysis remain foundational and are readily available. Riparian reserves serve as important connectivity corridors. Their ecological value can be improved through the protection of additional areas—"buffering the buffers"—to provide more resilient connectivity corridors. Where riparian reserves may not provide adequate landscape connectivity, new LSRs can help provide connectivity among existing LSRs.

When the Bureau of Land Management revised its western Oregon resource management plans in 2016, it significantly increased the amount of its lands allocated to LSRs by expanding the areas to include all designated critical habitat for the northern spotted owl and marbled murrelet. The Forest Service should do the same.

Additionally, the Forest Service should not reduce the width of riparian reserves within matrix lands. While some fisheries biologists may believe that one site-potential tree-height on each side of the stream is minimally adequate,<sup>39</sup> minimal is not the goal. The more of a watershed that is reserved from logging, the better it is for native fish species and the ecosystems that depend upon them. It must also be remembered that another important purpose of two site-potential tree-height stream buffers was to facilitate connectivity for terrestrial species in the heavily logged matrix landscape.

#### **b. Fine Filters**

The Survey and Manage program of the 1990s and early 2000s vastly increased our knowledge about rare plants and animals that live within Plan-area boundaries. Because this increased knowledge led to increased limitations on habitat disturbing activities, many species were ultimately removed from the program. In short, the Survey and Manage program was controversial because it disrupted timber generation, and politically-driven budget cuts ultimately ended it.<sup>40</sup>

Under the 2012 Planning Rule, the Forest Service has a new obligation to create fine filter protections to conserve "species of conservation concern." Here, the Forest Service has an obligation to ensure that either existing plan components are sufficient to "maintain a viable population of each species of conservation concern within the plan area" or, "If the responsible official determines that the plan components... are insufficient to provide such ecological conditions, then additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area."<sup>41</sup> We urge the Forest Service to commit to a transparent and scientifically-rigorous process to determine species of conservation concern and to commit to a robust monitoring program to ensure long-term species viability. Species should be selected based mainly on viability criteria with

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<sup>39</sup> Reeves, Gordon H., Brian R. Pickard, and K. Norman Johnson. An initial evaluation of potential options for managing riparian reserves of the Aquatic Conservation Strategy of the Northwest Forest Plan. United States Department of Agriculture, Forest Service, Pacific Northwest Research Station, 2016.

<sup>40</sup> Johnson, K. Norman, et al. The Making of the Northwest Forest Plan: The Wild Science of Saving Old Growth Ecosystems. Oregon State University Press, 2023.

<sup>41</sup> 36 CFR § 219.9(b)(1).

emphasis given to those with limited dispersal, sensitivity to management impacts, and climate change.

### **c. Aquatic Conservation Strategy**

Combining both coarse and fine filters, the ACS has been one of the most successful components of the NWFP, relying on riparian buffers, continuous monitoring, and restoration actions to protect and improve the integrity of aquatic systems in the plan area at four spatial scales—region, river basin, watershed, and specific sites. Ongoing monitoring has confirmed that “the fundamental tenets and ecological framework of the ACS are sound,” and that “aquatic ecosystems in the NWFP area are likely improving as expected, albeit slowly.”<sup>42</sup> It follows that plan amendments must not weaken the ACS, particularly in light of today’s freshwater extinction and climate crises.<sup>43</sup>

Any amendment to the ACS must seek to strengthen and expand the protections currently afforded by the provision. For instance, under the plan there is a system of refugia comprising 164 “key watersheds” that are crucial for protecting water quality and supporting at-risk fish species. As climate change alters the region’s hydrology and increasing human development threatens water sources for wildlife and people, an amendment to the ACS should strengthen existing protections—for instance by further restricting road building and logging—and protect additional watersheds. Expanded safeguards for aquatic systems on Forest Service land are particularly important given that the BLM weakened watershed protections on its land during its 2016 Western Oregon land management plan revision.<sup>44</sup> And as people, not just fish, need water, a Tier 3 key watershed should be established: “source water protection areas” under the Clean Water Act.

### **d. Beaver Restoration**

Beavers are a keystone species capable of producing complex aquatic ecosystems vital to the restoration of the Pacific Northwest’s salmon fisheries and aquatic ecosystems.<sup>45</sup> Beavers help to recharge groundwater, moderate fire behavior and create fire refugia, improve water quality, and recharge and connect floodplains. The economic benefit of ecosystem services provided by beavers has been estimated in the billions.<sup>46</sup> Across the Plan-area, however, beavers are either missing from their historic range or are vulnerable to being taken by trappers.

Amendments to the Northwest Forest Plan should explicitly provide for beaver restoration at scale and should incorporate key recommendations from the Climate Adaptation Library for the Western United States—an initiative of the Forest Service, National Park Service, and other

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<sup>42</sup> Spies et al. (2018).

<sup>43</sup> Albert J.S., Destouni G., Duke-Sylvester S.M., Magurran A.E., Oberdorff T., Reis R.E., Winemiller K.O., Ripple W.J. Scientists' warning to humanity on the freshwater biodiversity crisis. 2021. *Ambio*. 50(1):85-94.

<sup>44</sup> Blumm, Michael C., Susan Jane M. Brown, and Chelsea Stewart-Fusek. "THE WORLD'S LARGEST ECOSYSTEM MANAGEMENT PLAN." *Environmental Law* 52.2 (2022): note 146.

<sup>45</sup> Bouwes et al (2016). Ecosystem experiment reveals benefits of natural and simulated beaver dams to a threatened population of steelhead (*Oncorhynchus mykiss*). *Scientific Reports*: 6:28581

<sup>46</sup> Zhu et al (2022); ECONorthwest (2011). The economic value of beaver ecosystem services: Escalante River Basin, Utah. 64p. (report).

Thompson et al. (2021). Ecosystem services provided by beavers *Castor* spp. *Mammal Review*, 51(1), 25–39.

organizations.<sup>47</sup> These recommendations include increasing water storage by managing for beaver populations under a comprehensive beaver strategy, and restoring beaver habitat and populations to combat low flows and increase salmon survival.

#### **e. Marbled Murrelet Recovery**

Forest fragmentation is a threat to the region's declining population of the threatened Marbled Murrelet by facilitating invasion of ravens and jays that predate murrelet chicks on the nest. Increased buffers can help reduce the predation rate and is an important interim recovery measure because large amounts of additional murrelet habitat are not projected until near the end of the 100 year plan. Occupied sites, as identified pursuant to the Pacific Sea Bird Group Protocol, need to be buffered from any logging, including thinning, by at least 200 meters to prevent edge effects, canopy openings, and entry into the stand by corvids.

### **6. "Dry Forests" Amendments**

The management of dry forest ecosystems should be approached delicately. Changes to management objectives and priorities for dry forest ecosystems require a balancing of priorities and clear, objective rules to help ensure public trust and agency accountability.

#### **a. Dry vs. Wet Binary is Reductive**

The Forest Service and others talk about forest ecosystems using an overly-broad binary between "wet" and "dry" forests. In many forests, there are blurred lines between characteristically wet and dry forests, with some displaying characteristics of both wet and dry forests or with wet and dry forest conditions immediately adjacent to each other. Future amendments should lean into nuance and appreciate that forest ecosystems can vary, sometimes greatly, within a single National Forest and even a single LSR.

#### **b. Move All Dry Forests Into Late Successional Reserves**

The reserve network of the Northwest Forest Plan has been instrumental in protecting mature and old-growth forests and has been one of the Plan's more pronounced successes. Revising or downsizing the reserve network in dry forest ecosystems must be taken off the table at the outset. Instead, the opposite should be pursued: The amendment to the Northwest Forest Plan should move all dry forests into reserves and manage these for the protection and development of mature and old-growth forests.

As we have said before, we believe that biodiversity preservation is best achieved through expanding the existing reserve network to better foster landscape connectivity. Particularly for dry forest LSRs, we also note that expanding LSRs can help improve their function in light of increasing disturbance risk from climate change. The Forest Service posits that reserve size is an important indicator of disturbance resilience and found that reserves "should be considerably larger than the largest disturbance patch size if they are to maintain habitat and populations of the

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<sup>47</sup> Climate Adaptation Library for the Western United States. Available at: <https://adaptationpartners.org/library.php>

most extinction-prone species.”<sup>48</sup> Specifically, research indicates that protected areas larger than 25,000 acres can “better support the full range of natural disturbances within their boundaries than [can] small reserves.”<sup>49</sup> Currently, about 47% of reserves are larger than 25,000 acres, but more than 120 “are relatively small and could be completely burned in a single fire event.”<sup>50</sup>

Failure to protect the existing reserve network promises a new fight over the Northwest Forest Plan, leading to delay and inaction.

### **c. Dry Forest Ecosystems Important to Northern Spotted Owl**

The Northwest Forest Plan was created to solve the impasse over forest management primarily tied to the northern spotted owl and the protections afforded by the Plan have been critical to protect the mature and old-growth forests on which spotted owls depend.<sup>51</sup> Nevertheless, northern spotted owls are in severe and persistent decline across their entire range.<sup>52</sup> Many of the dry forest ecosystems within the Plan area are critical to the survival and recovery of the northern spotted owl.

In the Plan-area Southern Oregon and California forests, barred owl invasion is more recent, and thus, impacts to northern spotted owls from invasive barred owls are less dramatic. The Klamath Province in particular has been identified as an important population source, supplying dispersing owls to adjacent spotted owl provinces.<sup>53</sup> Other population modeling likewise suggests that the dry forest ecosystems at the southern edge of the northern spotted owl’s range are going to be critical for the conservation of the northern spotted owl, as these forests have the highest remaining populations and the lowest barred owl encounter rates.<sup>54</sup>

Large fires that impact nesting/roosting habitat are a concern for the species. However, habitat removal to prevent those same fires results in the same impact. While our organizations support moving forest conditions to a more fire-resilient state, that management objective must be tempered by protections for northern spotted owl populations. Impacts to northern spotted owls from forest management are avoidable; fires are relatively unpredictable.

Where potential nesting/roosting habitat exists, whether occupied or not, the Forest Service should work to retain the older, closed canopy forest conditions that serve both to provide habitat for the owl and to moderate fire conditions. Forest management plans that seek to disrupt crown contiguity, bulk density, or otherwise reduce fuels may reduce fire risk for the short-term,

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<sup>48</sup> Spies, T.A.; Stine, P.A.; Gravenmier, R.; Long, J.W.; Reilly, M.J., tech. coords. 2018. Synthesis of science to inform land management within the Northwest Forest Plan area. Gen. Tech. Rep. PNW-GTR-966. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 95-243. (Hereafter “Spies et al. 2018”).

<sup>49</sup> Spies et al. 2018, p. 136

<sup>50</sup> Spies et al. 2018.

<sup>51</sup> Courtney 2004, Noon and Blakesley 2006, Carroll and Johnson 2008

<sup>52</sup> Franklin, Alan B., et al. "Range-wide declines of northern spotted owl populations in the Pacific Northwest: A meta-analysis." *Biological Conservation* 259 (2021): 109168.

<sup>53</sup> Schumaker, Nathan H., et al. "Mapping sources, sinks, and connectivity using a simulation model of northern spotted owls." *Landscape Ecology* 29 (2014): 579-592.

<sup>54</sup> Dunk, Jeffrey R., et al. "Conservation planning for species recovery under the Endangered Species Act: A case study with the Northern Spotted Owl." *PLoS one* 14.1 (2019): e0210643.

however, these treatments need repeat interventions to maintain their effectiveness and would be difficult to apply at a meaningful scale. “Converting older, closed-canopy forests that function as fire refugia to more open, managed forests does not assure a dampening effect on wildfire severity, due in part to the complex changes in the microclimate of forest stands after thinning.”<sup>55</sup>

In addition to fire risk reduction considerations, the Forest Service should explicitly commit to aggressive barred owl removal in line with the barred owl management strategy under development by the U.S. Fish and Wildlife Service.

#### **d. Additional Authority to Manage Dry Forests Is Unnecessary**

The LSR framework is a cornerstone of the Plan. Repeatedly, the Notice of Intent promotes a false narrative that the Plan contributes to undesirable forest conditions by somehow inhibiting appropriate management of late-successional and riparian reserves, particularly those in dry forest ecosystems. Our organizations reject this premise. LSRs have been largely successful in meeting the Plan’s goals of developing and maintaining old forest ecosystems within the plan area and have contributed significantly to the creation and preservation of northern spotted owl and murrelet habitat. And to date, the loss of this habitat to wildfire has aligned closely with planners’ expectations.<sup>56</sup> Going forward, the Plan’s standards and guidelines provide the tools necessary for increasing landscape resilience as climate change increases the risk of stand-replacing wildfires and other anthropogenically-influenced disturbances.

LSRs “are designed to maintain late-successional forest ecosystems and protect them from loss due to large-scale fire, insect and disease epidemics, and major human impacts ... [and] to maintain natural ecosystem processes such as gap dynamics, natural regeneration, pathogenic fungal activity, insect herbivory, and low-intensity fire.”<sup>57</sup> To accomplish these objectives, the Plan’s standards guidelines “encourage the use of silvicultural practices to accelerate the development of overstocked young plantations into stands with late-successional and old-growth forest characteristics, and to reduce the risk to [LSRs] from severe impacts resulting from large-scale disturbances and unacceptable loss of habitat.”<sup>58</sup>

To meet these objectives, the reserve system consists of both large and small reserves for which management needs differ depending on whether the reserve is in a moist or dry forest. The management of all large reserves, and groups of small reserves, is to be consistent with a “Management Assessment” (MA) that determines the appropriate management specific to the reserve or reserve system. The MA is to generally include:

- (1) a history and inventory of overall vegetative conditions within the reserve,
- (2) a list of identified late-successional associated species known to exist within the Late-Successional Reserve and information on their locations,
- (3) a history and description of current land uses within the reserve, (4) a

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<sup>55</sup> Lesmeister, Damon B., et al. "Northern spotted owl nesting forests as fire refugia: A 30-year synthesis of large wildfires." *Fire Ecology* 17.1 (2021): 32.

<sup>56</sup> Spies et al. 2018, p. 156.

<sup>57</sup> NWFP Standards and Guidelines, B-1.

<sup>58</sup> NWFP Standards and Guidelines, B-1.



fire management plan, (5) criteria for developing appropriate treatments, (6) identification of specific areas that could be treated under those criteria, (7) a proposed implementation schedule tiered to higher order (i.e., larger scale) plans, and (8) proposed monitoring and evaluation components to help evaluate if future activities are carried out as intended and achieve desired results.<sup>59</sup>

The MA is subject to approval from the Regional Ecosystem Office, which may also develop criteria that would exempt certain activities from review.

This framework has been largely successful in creating old forest habitat in moist forests by providing critical safeguards from harmful timber harvests in the Plan area. Its success is not surprising, for as the Forest Service’s own scientists assert, “there is little debate that the best way to conserve and maximize old-growth values in moist forests is to exclude intensive timber management activities (e.g., clearcutting and plantation establishment) in old growth.”<sup>60</sup> The Forest Service has also found that “for the most part, the reserves have been large enough and numerous enough to absorb many recent large fires with limited loss of OGS I 80 or OGS I 200 forests in many but not all provinces.”<sup>61</sup> The agency also notes that, when considering the entire plan area, “the losses from wildfire approximated plan expectations.”<sup>62</sup>

Despite the success of the current reserve framework, some have called for an overhaul of the reserve system, even to the point of eliminating reserves entirely. Some advocates of this strategy contend that the plan’s standards and guidelines do not allow for appropriate management of dry forests in light of an increase in high-severity wildfire on the landscape. Hastily and significantly altering the reserve system, however, would be reactionary and short-sighted, especially because, as the Forest Service itself explains, “The real test of the reserve network can only be done over very long periods of time, and ultimately managers will have to be prepared for surprises and inevitable large events.”<sup>63</sup> Eliminating reserves for the sake of freely experimenting with forest management techniques and/or to facilitate the exploitation of our national forests would be a regrettable decision with consequences that could last generations.

Critically, the plan’s standards and guidelines *already recognize* that dry forests may require more management than moist forests. As the Forest Service’s own recent Science Synthesis for the plan explains, “In most cases, including the [Plan] standards and guidelines, biodiversity reserves *permit and encourage* restoration activities that further the species and ecosystem goals of the reserved area,” and the plan “indicates that restoration activities within reserves [are] needed for both moist and dry forests.”<sup>64</sup> Accordingly, the standards and guidelines provide direction for each forest type—in dry forests, for example, “Given the increased risk of fire ... due to lower moisture conditions and the rapid accumulation of fuels in the aftermath of insect outbreaks and drought, additional management activities are allowed in [LSRs],” such as “risk

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<sup>59</sup> NWFP Standards and Guidelines, C-11.

<sup>60</sup> Spies et al. 2018, p. 152.

<sup>61</sup> Spies et al. 2018, p. 154.

<sup>62</sup> Spies et al. 2018, p. 156.

<sup>63</sup> Spies et al. 2018, p. 157.

<sup>64</sup> Spies et al. 2018, p. 154 (emphasis added).

management activities” that may reduce the probability of major stand-replacing events.<sup>65</sup> And while the plan states that treatments should “not generally” harm currently suitable owl habitat or other late-successional conditions, it also recognizes that management of older stands, as well as additional measures that go beyond the standards and guidelines, may be appropriate in areas where risk levels are particularly high.<sup>66</sup>

The current framework likewise provides the appropriate language for managing reserves going forward, particularly in the face of climate change and increased wildfire. As noted above, the plan does not call for lack of management—to the contrary, the standards and guidelines “*encourage the use of silvicultural practices*” (i.e., vegetation management and prescribed burning) to not only accelerate the attainment of late-successional characteristics, but also “*to reduce the risk to [LSRs] from severe impacts resulting from large-scale disturbances and unacceptable loss of habitat.*”<sup>67</sup> Indeed, LSRs were created not only to increase old forest features, but also “to maintain natural ecosystem processes.”<sup>68</sup> And again, the plan recognizes that this means different things in different ecoregions and, accordingly, provides appropriate flexibility for successful management of both moist and dry forests.

By way of example, the Okanogan-Wenatchee National Forest, an east side dry forest, recently used existing Plan standards and guidelines to update the forest’s LSR MA to allow for treatments deemed necessary to reduce the risk of high-severity wildfire. The process took about a year and resulted in a thorough analysis of current conditions and disturbance patterns to inform management going forward.<sup>69</sup> In updating the MA, managers properly interpreted the Plan “to encourage the use of management in a thoughtful way when it was needed to maintain . . . late successional forest and to reduce the risk of loss.”<sup>70</sup> Rather than upend the current LSR framework, other forests should follow the Okanogan-Wenatchee’s lead in using the Plan’s existing standards and guidelines to update their LSR MAs to reflect the conditions and needs of their particular forests, as the Plan envisions.<sup>71</sup>

In sum, rather than cast away a reserve framework that has, to this point, accomplished its goals of old forest attainment and ecosystem resilience, decision makers should enact the Plan as written by updating MAs to reflect current and future conditions. It is imperative that the Forest Service retain dry forest LSRs and govern those LSRs using clear and objective standards and guidelines. Doing so would alleviate uncertainty by informing decision makers as to current and future conditions and would result in increased landscape resilience to disturbance regimes, particularly in light of climate change.

## **7. Incorporate 30x30 Direction into Forest Plan Amendments**

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<sup>65</sup> NWFP Standards and Guidelines, C-12.

<sup>66</sup> NWFP Standards and Guidelines, C-13.

<sup>67</sup> NWFP Standards and Guidelines, B-1.

<sup>68</sup> NWFP Standards and Guidelines, B-1.

<sup>69</sup> Kerry Kemp, FAC Presentation, Nov. 14, 2023.

<sup>70</sup> Kerry Kemp, FAC Presentation, Nov. 14, 2023.

<sup>71</sup> While the LSR MA update process is ongoing, the NWFP’s standards and guidelines even allow for certain treatments to occur pending MA completion if such treatments are absolutely necessary to alleviate high disturbance risks. *See* NWFP Standards and Guidelines, C-11.

In response to the climate and biodiversity crises, both the federal government and California have outlined a goal to conserve 30% of their lands by the year 2030. The Northwest Forest Plan should incorporate both the federal “America the Beautiful” 30x30 directive<sup>72</sup> and the California’s Nature Based Solutions 30x30 directive.<sup>73</sup> Under California’s definition of “conserved,” lands are defined as GAP status 1 or 2 under the national GAP code system maintained by the US Geological Survey.<sup>74</sup> USGS uses the same standard in its accounting of 30x30 lands and waters.

Our organizations urge the consideration of meeting state and federal 30x30 targets through Plan amendments. In doing so, the Plan, with additional protections, can contribute to such targets while playing a central role in climate mitigation and landscape connectivity overall.

The US Geological Survey defines a *protected area* (PA) as an area “dedicated to the preservation of biological diversity and to other natural (including extraction), recreation and cultural uses, managed for these purposes through legal or other effective means.”<sup>75</sup> For lands in late-successional and riparian reserves to qualify as contributing toward 30x30, the lands must be established and protected by not only land allocations, but strong standards (not guidelines) as well. Finally, any such lands must be withdrawn *from* the application of the federal mining laws, and also withdrawn *for* the conservation of nature.<sup>76</sup>

## V. Alternatives Analysis

Our organizations request that the Forest Service adopt as an action alternative amendments to the Northwest Forest Plan that:

1. Increase involvement of tribal governments over management decisions concerning their ancestral territory;
2. Protect and expand the existing reserve network, including in both dry and moist forest ecosystems;
3. Protect mature and old-growth trees in both the reserves and matrix and work in parallel with federal policy towards the identification and protection of mature and old-growth trees;
4. Rightsize timber production expectations;
5. Include management for in-forest carbon storage and sequestration;
6. Adopt species of conservation concern with an emphasis given to those with limited dispersal, sensitivity to management impacts, and climate change;
7. Adopt beaver restoration as a goal of the Plan;
8. Work towards lands conservation goals identified by state and federal “30x30” policies.

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<sup>72</sup> Executive Order 14008, “Executive Order on Tackling the Climate Crisis at Home and Abroad,” (January 27, 2001),

<sup>73</sup> Executive Order N-82-20.

<sup>74</sup> DellaSala, D.A., W.J. Ripple, R.A Birdsey, C.E., Ramirez, B.R. Noon, and S.A. Masino. A carpe diem moment on US Forests and Climate Policy. 2023. Invited paper J Forest and Geosci 1:1-5.

<sup>75</sup> <https://www.usgs.gov/programs/gap-analysis-project/pad-us-data-manual>

<sup>76</sup> 43 U.S.C. § 1714.

Thank you for your consideration of these comments. We look forward to engaging with the Forest Service throughout this process.