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Ms. Jacque Buchanan, Regional Forester

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United States Forest Service

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Dear Ms. Buchanan:

On behalf of Silvix Resources, Cascade Forest Conservancy, The Pew Charitable Trusts, The Wilderness Society, Klamath-Siskiyou Wildlands Center, Conservation Northwest, Methow Valley Citizens Council, and our supporters and members in the Pacific Northwest, we write to provide scoping comments in response to the Forest Service's notice of intent to prepare an environmental impact statement for the amendment for planning and management of northwest forests within the range of the northern spotted owl. United States Forest Service Region 5 and Region 6; California, Oregon, and Washington; Forest Plan Amendment for Planning and Management of Northwest Forests Within the Range of the Northern Spotted Owl, Notice of Intent to Prepare an Environmental Impact Statement, 88 Fed. Reg. 87,393 (Dec. 18, 2023) (hereinafter, Northwest Forest Plan [NFP] amendment). Our organizations support the Forest Service's intention to promulgate a climate-smart forestry amendment to the NFP and offer the following comments to inform the forthcoming draft environmental impact statement (DEIS).

## I. Background.

As commentators have explained,

In the 1990s, amid a bitter conflict over the continued industrial harvesting of Northwest forests that had been ongoing for roughly forty years, the federal government launched a remarkable experiment in federal land management planning: the Northwest Forest Plan. Approved in 1994, the largely science-based Plan was unprecedented in its breathtaking scope - roughly twenty-four million acres of federal lands in the western Cascades of Oregon, Washington, and northern California - about the size of the states of Delaware, Connecticut, New Hampshire, New Jersey, Rhode Island, and Vermont combined. Prompted by the listing of the northern spotted owl under the Endangered Species Act (ESA) due to its declining viability under the National Forest Management Act (NFMA), it was also innovative in its protections of old-growth forests, wildlife, and watersheds. The Plan's efforts to fuse the missions of two federal land management agencies - the U.S. Forest Service (the Forest Service) and Bureau of Land Management (BLM) - was also extraordinary, as was the relative lack of congressional involvement in its planning and execution. The fusing of the agencies' missions ended suddenly in 2016, when the Obama administration withdrew most BLM lands from the Plan, undermining the Plan's ecological integrity.

The Plan's expansive scope and pioneering protective provisions should not obscure the fact that the NFP was very much a compromise measure: It did not prohibit all (even most) old-growth forest harvesting or road-building in sensitive ecological areas, and left the federal land management agencies with sufficient discretion that enabled them to increase logging and road building in response to political demands for increased harvests. Although the clearcutting of old-growth forests has now largely (although not completely) ceased on national forestlands within the NFP area, and the Plan's innovative aquatic protection strategy has helped to stabilize salmonids and other riparian species, avian species like ESA-listed spotted owl and marbled murrelet have continued to decline. Moreover, while the Plan audaciously aimed to govern federal forest management for 100 years, it did not anticipate the magnitude of current problems like climate change, wildfire, and invasive species, most of which are beyond the control of federal land managers, and it has lacked funding to effectively monitor rare at-risk species.

When approved in 1994, the NFP amended all national forest and BLM land plans within the range of the northern spotted owl: western Washington, western Oregon, and northwest California. Although the 2016 revised BLM land plans effectively seceded BLM lands from the NFP, earlier - in 2012 - the Forest Service had amended its planning regulations to require for the first time the use of "best available science" and emphasized ecological integrity as the driving multiple use value for national forests. Because NFMA requires land and resource management plans (LRMPs) to be revised every fifteen years, an ongoing review of the NFP aimed at modernizing the Plan must apply the 2012 planning rule when addressing issues such as climate change, wildfire, and invasive species.

One of the chief virtues of the NFP is that over a quarter-century after its promulgation, it still exists.

Michael C. Blumm et. al., *The World's Largest Ecosystem Management Plan: The Northwest Forest Plan After a Quarter-Century*, 52 *Envtl. L.* 151, 153-56 (2022) (footnotes omitted).

As the world's first and largest ecosystem management plan, the NFP has been a point of contention since its inception. The Forest Service and BLM have attempted several amendments of the NFP since 2001, including three amendments to remove or modify the Survey and Manage program and two amendments targeted at changing the scale at which the Aquatic Conservation Strategy is implemented and compliance measured. These controversial amendments were largely invalidated by the courts. In 2007 and 2016, the BLM revised its resource management plans and withdrew its participation in the NFP, which drew legal challenges from both conservationists and the timber industry.

Despite this history, we believe that the proposed climate-smart forestry amendment to the NFP is necessary to address changing ecological and social conditions. The key to the success of this amendment will be transparency and use of the best available western and Indigenous science to inform changes to the Plan.

## II. Need for Change.

Our comments largely track scientific and policy recommendations made by experts in several documents including the peer-reviewed science synthesis,[1] Spies et al. (2019),[2] Gaines et al. (2022),[3] Johnson, Franklin, and Reeves (2023),[4] and Blumm et al. (2023).[5]

### A. Tribal Inclusion.

When the NFP was developed by the Forest Service and BLM in 1994, the federal land management agencies failed to meaningfully consult with the more than 80 Tribal governments and Indigenous communities in the NFP region. Consequently, the NFP contains no standards, guidelines, or other plan components pertaining to Indigenous use and stewardship of federal lands. The Forest Service must correct this failure in the forthcoming NFP amendment, particularly in light of changes in federal policy such as Joint Secretarial Order 3403, *Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters* <

The Forest Service must braid together western and Indigenous science to meet its treaty and trust responsibilities to PNW Tribal communities by developing specific plan components that address issues including but not limited to Tribal co-management and co-stewardship, access to cultural and religious sites, cultural burning, prioritization of Indigenous hunting and gathering on national forests, respect for Indigenous knowledge sovereignty, permitting and enforcement, identification and co-management of Tribal special interest areas, and other issues of interest to Tribes. Early, frequent, and meaningful consultation between the Forest Service and Tribes is critical for achieving this outcome.

## B. Climate Change.

The impacts of climate change on the planning area are far more complex and widespread than they were considered to be during the development of the NFP. Climate change will affect not only forested ecosystems but also poses significant challenges for the communities relying on these ecosystems.

Climate change is already contributing to the escalation of drought, wildfires, and insect outbreak risks in Pacific Northwest forested ecosystems.[6] Climate projections indicate a further warming trend in the Pacific Northwest. Mote and colleagues (2003) observed a temperature increase of 0.8 ° in the 20th century, and projected warming of 1.5-3.2 ° by the 2040s.[7] Elevated temperatures can impact ecosystems by increasing the severity and extent of natural disturbances such as wildfire, altering plant and animal distributions, and affecting the overall biodiversity of the region.

Changes in precipitation patterns are also anticipated, with a shift towards less snow and more rainfall, which can have implications for water availability and storage. Longer dry periods may lead to more severe droughts, posing challenges for aquatic ecosystems, agriculture, and water supplies. The variable nature of precipitation changes, with stronger winter storms disproportionately affecting coastal areas,[8] and intense rain events can result in increased erosion and flooding risks, infrastructure damage, and threats to communities. The amendment must establish clear standards and guidelines for reducing road density, right sizing the road network, and hydrologically decoupling roads from stream networks.

The impacts of climate change to the forested ecosystems in the NFP will be far reaching and may affect late-successional species such as the northern spotted owl. For example, researchers found that northern spotted owl prey abundance is likely to be affected by the changing climate, with wetter winters and higher summer temperatures influencing the availability and distribution of prey species.[9] These impacts, in turn, can further jeopardize the already vulnerable populations of species dependent on late-successional forest ecosystems.

Given this, we offer the following definition of "climate-smart forestry" and associated definitions:[10]

Climate-Smart Forestry is adaptive forest management and governance to protect and enhance the potential of forests to both adapt to and mitigate climate change. The aim is to sustain ecosystem integrity and functions and ensure the continuous delivery of ecosystem services.

Adaptation maintains or improves the ability of forests to grow under current and projected climatic conditions and increases their resistance and resilience. Adaptive capacity to climate change and disturbance regimes is enhanced by promoting genetic, compositional, structural, and functional diversity at both stand (patch) and landscape scales.

Mitigation of climate change by forests is a combination of carbon sequestration by trees and carbon storage by forest ecosystems (including savannas and woodlands), especially soils.

Ecological Integrity is the quality or condition of an ecosystem when its dominant ecological characteristics (composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation.

The impacts of climate change on the planning area are complex and multifaceted. The cumulative effect of these climate-related changes challenges the resilience of both ecosystems and communities. Forests may struggle to adapt to the altered conditions, potentially leading to shifts in vegetation types and ecosystem dynamics. Human communities may face increased risks from wildfires, water scarcity, flood damage, and loss of other important ecosystem services.

There is little doubt that the climate of the Pacific Northwest is changing in response to anthropogenic stressors, and that forested ecosystems are exhibiting corresponding changes. Adaptation strategies and climate-smart planning are crucial to mitigate these impacts and build resilience in the face of ongoing climate change. Consequently, the NFP amendment should reflect the reality of a changing climate as described in subsequent sections of this comment letter.

#### C. Mature and Old Growth Forest Conservation.

A significant driver behind the development of the NFP in the early 1990s was the rapidly disappearing mature (defined at the time as forests 80 years of age and older) and old growth (forests older than 200 years of age) forests that were suitable habitat for at-risk species like the northern spotted owl and marbled murrelet, and other terrestrial wildlife species. While the NFP reserved some forests older than 80 years of age in Late-Successional Reserves (LSRs), 80% of the predicted timber volume from the NFP region was intended to come from older, unreserved forests located in the matrix land use allocation. Timber harvest that focuses on the removal of older

forests remains highly controversial, although it has become a smaller relative portion of the region's timber harvest program, and has significant detrimental ecological consequences owing to the relative paucity of this forest condition.

On Earth Day 2022, President Biden promulgated Executive Order 14072, Strengthening the Nation's Forests, Communities, and Local Economies. 87 Fed. Reg. 24,851 (April 22, 2022). "To further conserve mature and old-growth forests and foster long-term United States forest health through climate-smart reforestation for the benefit of Americans today and for generations to come," EO 14072 directs the Secretaries of Agriculture and Interior to "define, identify, and complete an inventory of old-growth and mature forests on Federal lands" and then to "coordinate conservation and wildfire risk reduction activities, including consideration of climate-smart stewardship of mature and old-growth forests" with federal and nonfederal entities including Tribes, "analyze the threats to mature and old-growth forests on Federal lands, including from wildfires and climate change," and finally to "develop policies...to institutionalize climate-smart management and conservation strategies that address threats to mature and old-growth forests on Federal lands." *Id.* at 24,852.

In response to EO 14072, in April 2023, the Forest Service published its mature and old growth (MOG) definitions and inventory

<[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fs.usda.gov%2Fsites%2Fdefault%2Ffiles%2Fmature-and-old-growth-forests-tech.pdf&data=05%7C02%7Csm.fs.nwfp\\_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690387385%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sd%7Cata=gA07ol3eYzRV0CImlclcel4guO33fjag08BtmszGm5M4%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fs.usda.gov%2Fsites%2Fdefault%2Ffiles%2Fmature-and-old-growth-forests-tech.pdf&data=05%7C02%7Csm.fs.nwfp_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690387385%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sd%7Cata=gA07ol3eYzRV0CImlclcel4guO33fjag08BtmszGm5M4%3D&reserved=0)> , and, in November 2023,

the agency released a draft of its threat assessment

<[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fvimeo.com%2F884159272&data=05%7C02%7Csm.fs.nwfp\\_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690387385%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sd%7Cata=ZHKDpNT1Cx6D%2FYUXJmaHyKMelxCj2I%2FZ4IRm36ay5qE%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fvimeo.com%2F884159272&data=05%7C02%7Csm.fs.nwfp_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690387385%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sd%7Cata=ZHKDpNT1Cx6D%2FYUXJmaHyKMelxCj2I%2FZ4IRm36ay5qE%3D&reserved=0)> . Following these releases, in December 2023, the Forest Service announced its intention to promulgate a nationwide forest plan amendment to conserve old growth forests, recognizing that the present effort to amend the NFP was also underway. United States Forest Service, Land Management Plan Direction for Old-Growth Forest Conditions Across the National Forest System, Notice of Intent to Prepare an Environmental Impact Statement, 88 Fed. Reg. 88,042 (Dec. 20, 2023).

It is the policy of the federal government to conserve mature and old growth forests for the myriad ecosystem services and functions they provide to society. The NFP amendment therefore should reserve all old growth trees and forests wherever they are found. In moist forests, trees and naturally-regenerated forests 100 years of age and older should be protected. In seasonally dry forests within the range of the northern spotted owl, the Forest Service should utilize the dry forest restoration and management approaches described in Franklin and Johnson (2012)[11] to protect old trees (150 years and older), conserve and recruit large mature trees, and restore spatial heterogeneity, species composition and function. This approach also has the intended added benefit of providing necessary suitable habitat for imperiled species such as the northern spotted owl and marbled murrelet.

#### D. Wildfire Risk Reduction.

We recognize that the occurrence of uncharacteristic wildfire has dramatically increased since the promulgation of the NFP in 1994 and now threatens not only the persistence of old growth forests across the range of the owl, but also wildlife, water quality, and communities more broadly. Consequently, we support changes to the NFP that emphasize the need for concerted wildfire risk reduction activities near communities and restoring characteristic fire activity in seasonally dry forest stands that are overstocked due to a history of fire suppression. The reintroduction and frequent use of prescribed burning to "complete" treatments and restore ecological processes is also warranted. Similarly, the Forest Service should develop plan components that encourage cultural burning for treaty resource stewardship, recognizing that prescribed burning for fuels and cultural burning are separate and distinct management approaches.

The best available western and Indigenous science indicates that protecting the oldest trees in stands treated for wildfire resilience is compatible with risk reduction, and we urge the Forest Service to develop plan components that meet both conservation and risk reduction goals to restore the ecological integrity of these forests.

#### E. Late-Successional Reserves.

The NFP's network of LSRs was designed to conserve at-risk wildlife species dependent on mature and old-growth forests and largely - although not entirely - were designated where large intact areas of suitable habitat remained in 1994. While the reserve system may have been large and redundant enough to persist through major disturbances such as wildfire, key assumptions that predicated the placement and management of LSRs (i.e., stable climatic conditions) may not hold up today. Consequently, scientific experts have recommended several changes to LSRs and their management, including: (1) increase landscape area devoted to spotted owl habitat and resilient ecosystem types; (2) maintain existing older forests; (3) use regional planning to coordinate changes across management units and jurisdictions; (4) revise land management goals and objectives to be consistent with dynamic processes and rapid warming under climate change; and, (5) incorporate uncertainty into planning and make adapting to climate change a long-term, iterative process.[12]

In moist forest LSRs, the existing reserve system and management provisions, with the addition of new mature and old growth tree protections, are likely sufficient to maintain and restore the ecological integrity of these forests. Additional plan components that seek to restore the heterogeneity and function of plantations (old clear cuts) could be added to increase the resilience of moist forests across the landscape. Identification, conservation, and recruitment of fire refugia[13] in moist forests, particularly those in the southern portion of the spotted owl's range, will also benefit ecological integrity.

LSRs located in drier forest types may warrant modifications, although retaining the management objective[14] remains relevant and aligns well with the purpose and need of the proposed amendment. Perhaps the main

constraint of the existing LSR system is that ecological restoration actions are needed across the entire landscape to restore resilience to natural disturbance exacerbated by climate change across all land use allocations.[15] Paired with additional protections for old trees, addressing this need could include: 1) managing all lands for ecological integrity; 2) expanding the extent of existing Reserves to replace Matrix allocations; 3) providing updated management direction for existing Reserves to better accomplish LSR management objectives for late-successional and old-growth forest ecosystems in drier forest types; or 4) renaming/redesignating all existing dry forest LSRs as Managed Late-Successional Reserves.[16]

#### F. Northern Spotted Owl Conservation and Barred Owl Management.

The north star of the NFP is the conservation of mature and old growth forest habitat for late-successional associated wildlife, including the northern spotted owl. Despite the NFP's ecosystem management approach, populations of spotted owls continue to decline due to the legacy effects of habitat removal, loss of existing suitable habitat to wildfire and climate-induced stressors, and competition from the invasive barred owl. The NFP amendment should address existing habitat loss by conserving all remaining mature and old growth forest throughout the spotted owl's range and through landscape level forest restoration in seasonally dry forests to increase the resilience of frequent fire forests.

In addition, in the NFP amendment the Forest Service should commit to barred owl control as outlined in the United States Fish and Wildlife Service's (FWS) proposed barred owl management strategy <[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fws.gov%2Fproject%2Fbarred-owl-management&data=05%7C02%7Csm.fs.nwfp\\_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690393167%7CUnknown%7CTWFPbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQljoiv2luMzliLCJBTiil6lk1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&data=OxFCdVB4vS2b9uQu%2Bq23Uv91VC1dkfRki5DSwYBEvK0%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fws.gov%2Fproject%2Fbarred-owl-management&data=05%7C02%7Csm.fs.nwfp_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690393167%7CUnknown%7CTWFPbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQljoiv2luMzliLCJBTiil6lk1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&data=OxFCdVB4vS2b9uQu%2Bq23Uv91VC1dkfRki5DSwYBEvK0%3D&reserved=0)> . This strategy relies on voluntary land manager participation, but as a federal entity, the Forest Service can and should commit to implementing the strategy across the NFS as a reasonable and prudent measure (RPM) required through the ESA Section 7 consultation process. This RPM, along with a commitment to protecting all mature and old growth trees within the owl's range, would provide a solid foundation for the Forest Service to meet its ESA Section 7(a)(1) obligations.

#### G. Monitoring and Adaptive Management.

As Judge Dwyer explained in upholding the Northwest Forest Plan,

If the plan as implemented is to remain lawful the monitoring, watershed analysis, and mitigating steps called for by the ROD will have to be faithfully carried out, and adjustments made if necessary... The plan includes monitoring for implementation, verification as to results, and validation as to the underlying assumptions. The monitoring program is described above... As written it is legally sufficient. It remains, of course, to be carried out.



Monitoring is central to the plan's validity. If it is not funded, or not done for any reason, the plan will have to be reconsidered... A failure to monitor adequately, due to financial constraints, would call for reconsideration of the plan.

Seattle Audubon Soc. v. Lyons, 871 F. Supp. 1291, 1322-25 (W.D. Wash. 1994), aff'd sub nom. Seattle Audubon Soc. v. Moseley, 80 F.3d 1401 (9th Cir. 1996). A hallmark of the NFP is the robust monitoring and adaptive management provisions in the Plan, and indeed the monitoring that has taken place over the past three decades has provided a solid foundation for the proposed amendment.

The Forest Service should continue the ongoing Interagency Regional Monitoring Program, and commit to refreshing mid-scale evaluations such as Watershed Analyses and Late-Successional Reserve Assessments that have provided important mid-scale watershed information and prioritization for restoration. These documents have generally not been updated since they were created in the late 1990s and early 2000s, but should be updated to reflect new science findings and changed conditions.

Moreover, as the Forest Service develops plan components addressing the substantive issues discussed above, the agency should also incorporate adaptive management triggers, thresholds, and benchmarks into monitoring questions and plan components (i.e., guidelines) that allow for more rapid course corrections based on monitoring data without additional environmental analysis (i.e., scenario planning).[17] The agency should consider reinvigorating the Adaptive Management Areas (AMAs) and should consider dedicating some AMAs to Tribal and Indigenous management and stewardship.

### III. Conclusion.

Thank you for the opportunity to provide comments in response to the Forest Service's notice of intent to prepare an environmental impact statement for a climate-smart forestry amendment to the Northwest Forest Plan. We look forward to working with the agency on this opportunity to improve the management of national forestlands within the range of the northern spotted owl.

Sincerely,

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- [1] Spies, Thomas A. et al., tech. coords. 2018. Synthesis of science to inform land management within the Northwest Forest Plan area. Gen. Tech. Rep. PNW-GTR-970. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 186 p.
- [2] Spies, T.A., et al. 2019. Twenty-five years of the Northwest Forest Plan: what have we learned? *Frontiers in Ecology and Environment* 17: 511-520.
- [3] Gaines, W.L., Hessburg, P.F., Aplet, G.H., Henson, P., Prichard, S.J., Churchill, D.J., Jones, G.M., Isaak, D.J., and Vynne, C. 2022. Climate change and forest management on federal lands in the Pacific Northwest, USA: managing for forest dynamics. *Forest Ecology and Management* 504:119794.
- [4] K. Norman Johnson, Jerry F. Franklin, Gordon H. Reeves, *The Making of the Northwest Forest Plan: The Wild Science of Saving Old Growth Ecosystems* (2023).
- [5] Michael C. Blumm et. al., *The World's Largest Ecosystem Management Plan: The Northwest Forest Plan After a Quarter-Century*, 52 *Envtl. L.* 151 (2022).
- [6] Halofsky, Jessica E., David L. Peterson, and Brian J. Harvey. Changing wildfire, changing forests: the effects of climate change on fire regimes and vegetation in the Pacific Northwest, USA. *Fire Ecology* 16, no. 1 (2020): 1-26.
- [7] Mote, Philip W., Edward A. Parson, Alan F. Hamlet, William S. Keeton, Dennis Lettenmaier, Nathan Mantua, Edward L. Miles et al. "Preparing for climatic change: the water, salmon, and forests of the Pacific Northwest." *Climatic change* 61 (2003): 45-88.
- [8] Espinoza, Vicky, Duane E. Waliser, Bin Guan, David A. Lavers, and F. Martin Ralph. "Global analysis of climate change projection effects on atmospheric rivers." *Geophysical Research Letters* 45, no. 9 (2018): 4299-4308.
- [9] Glenn, Elizabeth M., Robert G. Anthony, and Eric D. Forsman. "Population trends in northern spotted owls: associations with climate in the Pacific Northwest." *Biological Conservation* 143, no. 11 (2010): 2543-2552.
- [10] Bowditch, E., Santopouli, G. Binder, F. [and others]. 2020. What is climate-smart forestry? a definition from a multinational collaborative process focused on mountain regions of Europe. *Ecosystem Services* 43: <https://doi.org/10.1016/j.ecoser.2020.101113>  
<[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1016%2Fj.ecoser.2020.101113&data=05%7C02%7Csm.fs.nwfp\\_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690399150%7CUnknown%7CTWFPbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQljoiv2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=xITfH25ruzr76nGExVdTqk5wA69b25R22NMCegQDzg%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1016%2Fj.ecoser.2020.101113&data=05%7C02%7Csm.fs.nwfp_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690399150%7CUnknown%7CTWFPbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQljoiv2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=xITfH25ruzr76nGExVdTqk5wA69b25R22NMCegQDzg%3D&reserved=0) ; Mathys, A.S., Bottero, A., Stadelmann, G., Thurig, E., Ferritti, M., Temperli, C. 2021. Presenting a climate-smart forestry evaluation framework based on national forest inventories. *Ecological Indicators* 133: <https://doi.org/10.1016/j.ecolind.2021.108459>  
<[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1016%2Fj.ecolind.2021.108459&data=05%7C02%7Csm.fs.nwfp\\_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690405222%7CUnknown%7CTWFPbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQljoiv2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=JqIN616ybU%2FzL0rP9U5GABYbKqLgy44ibfXGa5eLLik%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1016%2Fj.ecolind.2021.108459&data=05%7C02%7Csm.fs.nwfp_fac%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690405222%7CUnknown%7CTWFPbGZsb3d8eyJWljoimc4wLjAwMDAiLCJQljoiv2luMzliLCJBTil6lk1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=JqIN616ybU%2FzL0rP9U5GABYbKqLgy44ibfXGa5eLLik%3D&reserved=0) ; Cooper, L., and D. MacFarlane. 2023. Climate-Smart Forestry: promise and risks for forests, society, and climate. *PLOS Clim* 2(6): e0000212.

[11] Franklin, J. and Johnson, K.N., A Restoration Framework for Federal Forests in the Pacific Northwest, *J. For.* 110(8):429-439 (2012), <http://dx.doi.org/10.5849/jof.10-006>  
<[https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fdx.doi.org%2F10.5849%2Fjof.10-006&data=05%7C02%7Csm.fs.nwfp\\_faca%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690410444%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdta=rtVLHwg72iHTZWw8UBrVlcMi7PBKJWgLC%2B0qq8LKUgA%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fdx.doi.org%2F10.5849%2Fjof.10-006&data=05%7C02%7Csm.fs.nwfp_faca%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690410444%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdta=rtVLHwg72iHTZWw8UBrVlcMi7PBKJWgLC%2B0qq8LKUgA%3D&reserved=0)> . See also, K. Norman Johnson, Jerry F. Franklin, Gordon H. Reeves, *The Making of the Northwest Forest Plan: The Wild Science of Saving Old Growth Ecosystems* (2023).

[12] Spies, T.A., Giesen, T.W., Swanson, F.J., Franklin, J.F., Lach, D., and Johnson, K.N. 2010. Climate change adaptation strategies for federal forests of the Pacific Northwest, USA: ecological, policy, and socio-economic perspectives. *Landscape Ecology* 25:1185-1199.

[13] Krawchuk, M.A., S.L. Haire, J. Coop, M.A. Parisien, E. Whitman, G. Chong, and C. Miller. 2016. Topographic and fire weather controls of fire refugia in forested ecosystems of northwestern North America. *Ecosphere* 7(12):e10632.10.1002/ecs.1632; Lesmeister, D.B., S.G. Sovern, R.J. Davis, D.M. Bell, M.J. Gregory, and J.C. Vogeler.

2019. Mixed-severity wildfire and habitat of an old-forest obligate. *Ecosphere* 10(4): e02696.

[14] "The objective of Late-Successional Reserves is to protect and enhance conditions of late-successional and old-growth forest ecosystems..." ROD, C-9.

[15] Franklin and Johnson 2012, Spotted Owl Recovery Plan#, Okanogan-Wenatchee NF Restoration Strategy 2012  
<[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fs.usda.gov%2FInternet%2FFSE\\_DOCUMENTS%2Fstelprdb5340103.pdf&data=05%7C02%7Csm.fs.nwfp\\_faca%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690417232%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdta=FrclXuN4L5DKcu2IR5pI6JHKwKPMPMY1FnfgCOfoFec%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fs.usda.gov%2FInternet%2FFSE_DOCUMENTS%2Fstelprdb5340103.pdf&data=05%7C02%7Csm.fs.nwfp_faca%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690417232%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdta=FrclXuN4L5DKcu2IR5pI6JHKwKPMPMY1FnfgCOfoFec%3D&reserved=0)> .

[16] Managed LSRs "are similar to Late-Successional Reserves but are identified for certain owl locations in the drier provinces where regular and frequent fire is a natural part of the ecosystem. Certain silvicultural treatments and fire hazard reduction treatments are allowed to help prevent complete stand destruction from large catastrophic events such as high intensity, high severity fires; or disease or insect epidemics.". Northwest Forest Plan Standards & Guidelines (NFP S&Gs), A-4. Managed LSRs also have special management considerations designed to achieve the objectives of these land use allocations. See, NFP S&Gs, C-26 - C-28; C-2 - C-6).

[17] We point the Forest Service to the comments submitted by some of our organizations on the agency's proposed Forest Service Manual Chapter 2040  
<[https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcara.fs2c.usda.gov%2FPublic%2FLetter%2F4511214%3Fproject%3DORMS-3585&data=05%7C02%7Csm.fs.nwfp\\_faca%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690423043%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdta=3clw%2Fitfgm8we0P6LY3uQvKxPI4wxAdY0IWLHa%2Ftozo%3D&reserved=0](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcara.fs2c.usda.gov%2FPublic%2FLetter%2F4511214%3Fproject%3DORMS-3585&data=05%7C02%7Csm.fs.nwfp_faca%40usda.gov%7C2fe23910f125435812dd08dc2400cdb9%7Ced5b36e701ee4ebc867ee03cfa0d4697%7C1%7C0%7C638424841690423043%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6I1haWwiLCJXVCi6Mn0%3D%7C0%7C%7C%7C&sdta=3clw%2Fitfgm8we0P6LY3uQvKxPI4wxAdY0IWLHa%2Ftozo%3D&reserved=0)> that are designed to bolster robust monitoring and adaptive management in planning.

