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THE WORLD'S LARGEST ECOSYSTEM MANAGEMENT PLAN: THE NORTHWEST FOREST PLAN AFTER A QUARTER-CENTURY (12.08.21)

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Susan Jane Brown**
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For decades, the public forests of the Pacific Northwest were subject to widespread clearcutting of its old-growth trees as part of a federal policy promoting industrial logging. That era came to end in the early 1990s, due to court injunctions enforcing environmental laws like the National Environmental Policy Act and the National Forest Management Act, a response to diminishing old-growth dependent species like the northern spotted owl. Fulfilling a campaign promise to resolve the contentious issue by protecting both wildlife habitat and a logging industry important to local communities, President Clinton and his administration conducted a remarkable 1993 symposium on the economics and science of preserving rapidly disappearing habitat for ESA-listed species like the northern spotted owl and several salmonids. The result was the 1994 Northwest Forest Plan (NFP), widely recognized as the largest commitment to ecosystem management worldwide. Somewhat surprisingly, the NFP is still in effect over a quarter-century later, despite determined efforts to eviscerate it.

This article examines the NFP, its antecedents, provisions, court interpretations, and future. In many respects, despite persistent controversy over the legal underpinnings of the NFP, the plan has provided substantial protection for Northwest's public forests, and – although it did not end all public timber harvests – largely ended harvesting of public old-growth forests. Moreover, the plan's aquatic protection strategy has proved quite effective and worthy of emulation elsewhere.

Although the Bush administration's repeated efforts to terminate the plan failed, the Obama administration removed about ten percent of the federal forests subject to the plan from its reach, substantially undermining its ecological premises. The courts have so far sustained these removals, casting a pall of uncertainty over efforts to update the NFP to reflect current challenges posed by wildfires and climate change. This article suggests that the goals of a revised NFP should be linked to the role that federal public Pacific Northwest forests can play in the United States' international obligations to combat climate change. We recommend a number of changes to the NFP, including ending both post-fire salvage sales and the logging of mature and old-growth forests. To accommodate these changes, we suggest providing a "just transition" for affected rural communities and increased flexibility concerning the boundaries of protective terrestrial reserves in the southern reaches of the plan. We maintain that despite lingering uncertainty about its scope of coverage, the NFP can continue to provide the signature example of landscape planning worldwide.

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Introduction

I. Background: The Antecedents

- A. Public Forestland Management Prior to World War II**
- B. Transforming the Pacific Northwest's Forests in the Post-War Years**

II. Change Comes to the Pacific Northwest

- A. The Northern Spotted Owl as an Indicator Species**
- B. The Endangered Species Act Listing and the Zilly Decision**
- C. The Section 318 Rider: Congressional Intervention**

III. The Birth of the Northwest Forest Plan

- A. The Portland Timber Summit**
- B. FEMAT: Science versus Economics and Politics**
- C. The Dwyer Decision**

IV. The Northwest Forest Plan's Provisions

- A. Land Allocations**
- B. The Aquatic Conservation Strategy**
- C. The Survey and Management Requirement**
- D. Adaptive Management and Monitoring**
- E. Socioeconomic Considerations**

V. Court Interpretations of the Northwest Forest Plan

- A. Implementing the Survey and Manage Program**
- B. Implementing the Aquatic Conservation Strategy**
- C. Managing for Owls After Wildfire**

VI. Exempting O&C Lands from the Plan: the Western Oregon Plan Revision(s)

VII. Revising the Northwest Forest Plan

- A. The Socioeconomic Dimension**
- B. Ensuring Ecological Integrity**
 - 1. Protecting Biological Diversity**
 - a. Reserves**
 - b. Wildfire**
 - c. Wildlife**
 - 2. The Continuing Importance of the Aquatic Conservation Strategy**
 - 3. Climate Change**
 - 4. Tribal Co-management**
 - 5. The Role of the Oregon and California Lands**

VIII. Conclusion

INTRODUCTION

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 (NFP). Approved in 1994, the largely science-based plan was unprecedented in its breathtaking scope –

roughly 24 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 United States 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.¹

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 old-growth forest harvesting or road-building in sensitive ecological areas, and left the federal managing agencies with sufficient discretion that enabled them to increase logging and roadbuilding in response to political demands for increased harvests.² Although 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 the ESA-listed spotted owl and marbled murrelet have continued to decline.³ Moreover, although the plan audaciously aimed to govern federal forest management for

¹ See *infra* note 110 and accompanying text.

² See, e.g., Oregon Wild, *Northwest Forest Plan* (June 10, 2021) <https://oregonwild.org/forests/forest-protection-and-restoration/nwfp> (suggesting that the plan allowed logging and road-building in ecologically critical areas and failed to protect “mature and old-growth forests, roadless areas, municipal watersheds, and complex young forests that are recovering from fire”).

³ See Thomas A. Spies et al., *Twenty-five years of the Northwest Forest Plan: what have we learned?*, 17 FRONTIERS IN ECOLOGY & THE ENVIRONMENT 511, 512 (Aug. 28, 2019), <https://doi.org/10.1002/fee.2101>.

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.⁴

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 regulations⁵ to require for the first time the use of “best available science” and emphasizing ecological integrity as the driving multiple use value for national forests.⁶ Because the National Forest Management Act (NFMA) requires land and resource management plans to be revised every fifteen years,⁷ 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.⁸

One of the chief virtues of the NFP is that over a quarter-century after its promulgation, it still exists. The plan somehow survived determined political efforts to eliminate or eviscerate it,⁹ even under hostile Bush and Trump Administrations that opened up federal public lands to

⁴ See *id.* at 512-13.

⁵ The national forest planning regulations have been the subject of considerable controversy for years. The Clinton Administration amended the original 1982 regulations in 2000, but the Bush Administration revised the regulations in 2005 and 2008. The Bush regulations failed to survive judicial review, however, and the reviewing court reinstated the 1982 regulations. *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 341 F.3d 961 (9th Cir. 2003). The Obama Administration finally revised the regulations in 2012, which did survive a facial challenge. *Fed. Forest Res. Coal. v. Vilsack*, 100 F. Supp. 3d 21 (D.D.C. 2015).

⁶ 36 C.F.R. § 219.3 (2012). The 2012 rule also emphasized biodiversity conservation on an ecosystem basis. 36 C.F.R. § 219.9; see also 36 C.F.R. §§ 219.8, 219.10; Spies et al., *supra* note 3, at 513.

⁷ 16 U.S.C. § 1604(f)(5).

⁸ See *Modernizing Forest Plans in the Northwest*, FOREST SERVICE, PACIFIC NORTHWEST REGION (July 18, 2021), <https://www.fs.usda.gov/detail/r6/landmanagement/?cid=stelprd3831710>. One commentator called the 2012 planning rule “the most important change in federal forest biodiversity policy nationwide over the past 30 years.” Spies et al., *supra* note 3, at 511.

⁹ See *infra* notes 146-48, 173, 191-198, 201, 204-06, 219-22, 224-26, 236-37 and accompanying text.

widespread development.¹⁰ The plan withstood opposition in the face of an ongoing but significant decline in regional timber harvest as well as erroneous but widespread claims that it failed to deliver on “guaranteed” minimum harvest levels.¹¹ This article explains how the plan came to be, how it has shaped the management of an enormous amount of federal land, how it has survived, and its uncertain future.

Section I provides background on the evolution of federal forest management in the years before the NFP, focusing on the years both before and after World War II. Section II discusses the events leading up to the promulgation of the NFP, including the ESA-listings of the northern spotted owl and marbled murrelet and ensuing but temporary congressional intervention. Section III explains the evolution of the NFP, the role of science, economics, and politics in fashioning the

¹⁰ See, e.g., Michael C. Blumm & Olivier Jamin, *The Trump Public Lands Revolution: Redefining “the Public” in Public Land Law*, 48 ENVTL. L. 311 (2018) (explaining the Trump Administration’s efforts to dismantle environmental protections of national monuments, landscape federal land planning, and sage grouse habitat, while promoting fossil-fuel development). Somewhat surprisingly, the Trump Administration did not attempt to amend the NFP, although it did substantially weaken regulations implementing the National Environmental Policy Act (NEPA), see Lisa Friedman, *Trump Weakens Major Conservation Law to Speed Construction Permits*, New York Times (July 15, 2020), <https://www.nytimes.com/2020/07/15/climate/trump-environment-nepa.html>; and the Endangered Species Act, see Lisa Friedman, *U.S. Significantly Weakens Endangered Species Act*, New York Times (Aug. 12, 2019), <https://www.nytimes.com/2019/08/12/climate/endangered-species-act-changes.html>.

The Biden Administration has announced it will revisit both sets of regulations, which can significantly affect implementation of the NFP. See Fact Sheet: List of Agency Actions for Review, White House Briefing Room (Jan. 20, 2021) (providing a list of agency actions – including the Trump Administration’s changes to NEPA and the ESA regulations – that the administration will review under Executive Order No. 13990 (Jan. 20, 2021), “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis”); see Press Release, Natural Resources Defense Council, Biden Administration Set to Reverse Trump Efforts to Weaken ESA (June 4, 2021), <https://www.nrdc.org/media/2021/210604-1>; Elizabeth Diller et al., *President Biden’s early actions on environmental policy and their relevance to the National Environmental Policy Act (NEPA)*, ICF (June 2, 2021) <https://www.icf.com/insights/environment/biden-environmental-policy-updates>.

¹¹ The NFP never actually included any promised annual harvests, although it did have anticipated goals. The plan’s 1.1 billion board feet (bbf) per year target was never met: instead, the total volume of timber offered for sale from Forest Service and BLM lands in the plan area averaged 526 million board feet annually between 1995 and 2003. See *infra* notes 126-27 and accompanying text; U.S. DEP’T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-966, SYNTHESIS OF SCIENCE TO INFORM LAND MANAGEMENT WITHIN THE NORTHWEST FOREST PLAN AREA 641 (June 2018) [hereinafter SYNTHESIS OF SCIENCE].

plan, and its judicial ratification. Section IV examines the chief provisions of the plan and their effects, while section V explores the court interpretations of challenges to the plan and its provisions. Section VI turns to the lessons the NFP and its implementation may hold for other efforts at landscape planning, a concept that the Republican Congress disavowed in 2017 when BLM attempted to introduce it into its land planning regulations.¹² We conclude that the NFP—remarkable for both its size and substance—remains an ecosystem management program worthy of study and emulation in the years ahead, assuming it survives ongoing litigation attempting to destroy its ecological underpinnings.¹³

I. BACKGROUND: THE ANTECEDENTS

The agencies implementing the NFP, the Forest Service and BLM, are quite different in their origins and orientation. The Forest Service has had longstanding mission to manage national forests, a heritage of expertise dating to the days of Gifford Pinchot, and a longstanding commitment to multiple use.¹⁴ BLM mostly manages rangelands that were historically not valued sufficiently for private disposal or for public reservation. The majority of the commercial forest lands managed by BLM for timber production are concentrated in what are known as the Oregon and California (O& C) lands, railroad grant lands that were revested in the federal government in the early years of the 20th century, and which historically were heavily logged for the benefit of local communities.¹⁵

A. Public Forestland Management Prior to World War II

¹² See Blumm & Jamin, *supra* note 10, at 338-41 (discussing Congress' March 2017 veto of BLM's revised planning regulations under the Congressional Review Act).

¹³ See *infra* note 243 and accompanying text (discussing *Am. Forest Res. Council v. Hammond*, 422 F. Supp. 3d 184, 189–91 (D.D.C. 2019), *appeal filed sub nom. Am. Forest Res. Council v. United States*, 20-5008 (D.C. Cir. Jan. 24, 2020)).

¹⁴ See *infra* notes 16-20, 22-23 and accompanying text.

¹⁵ See *infra* notes 24-31 and accompanying text.

Congress established the Forest Service in 1905 to manage the federal government's newly created forest reserves to prevent flooding, maintain water flows, and provide a sustainable source of timber.¹⁶ Today, the agency manages nearly 145 million acres of federal forestland, twenty million acres in the Pacific Northwest.¹⁷ Over the decades, the Forest Service's approach to its resource management duties evolved significantly, influenced by both national and local political, economic, social, and environmental conditions.

During most of the first half of the twentieth century, the Forest Service regarded itself as custodian of the national forests.¹⁸ The agency's management practices primarily involved implementing Gifford Pinchot's "wise use" approach to silviculture, in which conservation meant sustained timber yields and protection of favorable water flow conditions, especially to avoid flooding.¹⁹ National forest boundaries provided large swaths of forestlands some insulation from an encroaching timber industry that saw the Pacific Northwest as the last frontier after its cut-and-run harvest practices exhausted forests in the U.S. South and Midwest.²⁰ In the interest of providing

¹⁶ The Creative Act of 1891 authorized the president to withdraw forestland from the public domain, Act of Mar. 3, 1891, s. 24, 26 Stat. 1103, amended by 16 U.S.C. s. 471 (repealed 1976). The Organic Administration Act provided management standards for these reserves, directing the federal government to manage the forests "to secure favorable water flow conditions and to furnish a continuous supply of timber." Act of June 4, 1897, 30 Stat. 34, 16 U.S.C. s. 475 (1988). In 1905, Congress granted President Theodore Roosevelt's wish and transferred the reserves from the Department of Interior to the Department of Agriculture's newly established U.S. Forest Service. *See generally* Charles Wilkinson & H. Michael Anderson, *Land and Resource Planning in the National Forests*, 64 OR. L. REV. 1, 18 (1985).

¹⁷ Anne A. Riddle, *Timber Harvesting on Federal Lands* 1 (Cong. Research Serv. Rpt. R45688, 2020).

¹⁸ Wilkinson & Anderson, *supra* note 16, at 133.

¹⁹ *Id.* at 135; Pinchot's utilitarianism aimed to produce "greatest good of the greatest number in the long run," in contrast to the legacy of the cut-and-run practices of private timber, which often flooded downstream towns. *Id.* at notes 269, 1039; *see also* GIFFORD PINCHOT, *BREAKING NEW GROUND* 322 (1947) ("The forest and its relation to streams and inland navigation, to water power and flood control; to the soil and its erosion; to coal and oil and other minerals; to fish and game; and many another possible use or waste of natural resources . . . here were not isolated and separate problems").

²⁰ DONALD F. FLORA, U.S. DEP'T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-562 *FOREST ECONOMICS RESEARCH AT THE PACIFIC NORTHWEST RESEARCH STATION, TO 2000* 1 (2003) ("It was a vicious circle: cut faster to pay for the newer, bigger gear that was acquired to cut faster. Meanwhile, cut-and-get-out timbering was being reconsidered in the Northwest. Timbermen were themselves concerned about overcutting and a long-term future, albeit in a commercial sense").

recreation opportunities to the public, the agency added recreation to its utilitarian calculus, and in 1924 the Forest Service adopted assistant regional forester Aldo Leopold's²¹ pioneering proposal to reserve a wilderness area in New Mexico and other regions followed suit.²² By 1939, the agency's administrative wilderness system included fourteen million acres.²³

In contrast to the Forest Service, BLM—established in 1946 out of a fusion of the Grazing Service and General Land Office—had no forestland management expertise at its creation, and neither did its predecessors.²⁴ BLM was instead created to manage the leftover public domain lands, mostly rangelands that were too arid for farming or commercial timber production.²⁵ Today, the agency is responsible for more surface land acreage than any other federal agency—245 million acres—but only 2.4 million acres—less than one percent of the total—are O&C lands,²⁶ which the federal government reacquired following the violation of land-grant terms by the Oregon & California Railroad and its successors.²⁷ It took Congress over twenty years to decide what to do

²¹ Although Leopold was only an assistant regional forester when he proposed establishing an administrative wilderness in the Gila National Forest, the renowned naturalist later would earn a reputation as the “Father of Wildlife Management” and the “Father of the Wilderness System.” See SUSAN L. FLADER, THINKING LIKE A MOUNTAIN: ALDO LEOPOLD AND THE EVOLUTION OF AN ECOLOGICAL ATTITUDE TOWARD DEER, WOLVES, AND FORESTS 16, 22 (1994).

²² Wilkinson & Anderson, *supra* note 16, at 26 (explaining that the time was ripe for Leopold's vision to take hold, for in the post-war era the Forest Service incorporated recreation as part of its utilitarian calculus. In 1921, the Forest Service manual announced that “No plan of national forest administration would be complete which did not conserve and make [recreation resources] available for public use”).

²³ *Id.*

²⁴ The GLO, an office in the Department of the Interior, encouraged settlement of public land under the Homestead Act of 1862, which granted federal land to settlers looking to farm and live on lands disposed of by the federal government. The GLO was responsible for public land records, sales, grants, and supervision of local land offices. See Joseph Ross, *FLPMA Turns 30*, 28 SOC. FOR RANGE MGMT 16, 17 (2006); The Grazing Service administered the public land grazing permit system established by the 1934 Taylor Grazing Act. Taylor Grazing Act of 1934, Pub. L. No. 73-482, 48 Stat. 1269 (1934).

²⁵ *Opportunity and Challenge: The Story of the BLM*, NATIONAL PARK SERVICE (Sept. 8, 2008), https://www.nps.gov/parkhistory/online_books/blm/history/chap1.htm.

²⁶ BLM National, U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT (Aug. 17, 2021, 1:06 PM), <https://www.blm.gov/about/what-we-manage/national>.

²⁷ *Id.* at 10. In the mid-nineteenth century, an effort to settle the West, federal government granted railroad companies approximately 179 million acres of public land for building railroads. These expansive land grants, compensation to the railroads for building the lines for which a cashless Congress could not pay,

with the O&C lands,²⁸ and then addressed them only in opaque terms:²⁹ they are now at the center of ongoing litigation.³⁰ BLM inherited the O&C lands at its formation and historically managed them under timber-dominant principles with near-unfettered discretion, at least until the spotted owl injunctions in the 1990s.³¹

B. Transforming the Pacific Northwest's Federal Forests in the Post-War Years

included provisions requiring the railroads to sell excess land to actual settlers at specified prices, and in tracts no larger than 160 acres (a quarter-section). One such grant was to the Oregon and California Railroad, which received a 3.7 million acre land-grant in 1866 to build a line from Portland to Northern California. The ensuing land sales were beset with widespread fraud, as the railroad, including its successor, Southern Pacific, frequently sold land in violation of the land grant provisions, selling timber land to non-settlers, disregarding acre limits, and exceeding specified prices. Numerous prominent individuals, including government officials, were convicted of land fraud and convicted. The accompanying public outcry induced the federal government to crack down on illegal land disposition; Southern Pacific was prosecuted for violating its land-grant, and eventually forced to return 2.9 million acres of forestland to the federal government. The Supreme Court upheld the reversion in 1915. *See* Michael C. Blumm & Tim Wigington, *The Oregon & California Railroad Grant Lands' Sordid Past, Contentious Present, and Uncertain Future: A Century of Conflict* 40 B.C. ENVTL. AFF. L. REV. 1-3, 9-17 (2013); *Oregon & California Railroad v. United States*, 238 U.S. 393, 419, 431, 438-39 (1915).

²⁸ In 1916, shortly after the Supreme Court's decision affirming the federal reversion, Congress funded compensation for Southern Pacific that the Court required and also promised to subsidize local counties for their loss of tax base due to the reversion. Over the years, these payments-in-lieu of taxes were inconsistent—in one 10-year period the counties received no payments, largely because timber sales were few. *See* Blumm & Wigington, *supra* note 27, at 20. But the counties organized and became an effective, publicly-funded lobby that succeeded in convincing Congress to enact the Oregon and California Land Act of 1937 (OCLA), 43 U.S.C. § 1181 and then persuaded BLM to adopt a dominant-timber policy for the O&C lands for over fifty years.

²⁹ The OCLA called upon BLM to manage the O&C lands for five purposes: 1) “permanent forest production,” conducted under “sustained yield” principles to provide a “permanent timber supply”; 2) watershed protection; 3) streamflow regulation; 4) contributing to the economic stability of local communities; and 5) recreation. *Id.* § 1181(a). The Act has been called the first federal codification of multiple use. Paul G. Dodds, *The Oregon and California Lands: A Peculiar History Produces Environmental Problems*, 17 *Envtl. L.* 739, 755 (1987). But the Ninth Circuit disagreed in its *Headwaters* decision. *See infra* note 116. Not until a decade after the OCLA, in the Materials Act of 1947, did Congress give BLM the authority to sell timber. 30 U.S.C. § 601 (1955).

³⁰ *See infra* notes 242-244 and accompanying text.

³¹ *See* Deborah Scott & Susan Jane M. Brown, *The Oregon and California Lands Act: revisiting the concept of “dominant use,”* 21 *J. OF ENV. L. & LIT.* 259, 267 (2006); Blumm & Wigington, *supra* note 27, at 22 (observing that despite the multiple-use purposes expressed in the OCLA, *supra* note 29, BLM managed the O&C lands for a half-century with the goal of maximum timber harvests, in response to pressure from the O&C counties). Moreover, soon after the enactment of the OCLA, BLM's predecessor expressed enthusiasm for the statute's multiple-use directive. *See* Scott & Brown, *supra*, at 284 (discussing the General Land Office's 1938 policy statement, which focused on the OCLA's conservation purposes).

World War II drastically altered the trajectory of conservation planning in Pacific Northwest national forests. In 1942, after the federal government declared wood a “critical war material,” the estimated demand for wood products that year exceeded estimated production from national forests by threefold.³² As a result, the Forest Service collaborated with the War Production Board to rapidly increase timber yield from both private and public lands: timber sales in national forests rose 238 percent between 1939 and 1945.³³ This sudden transition of the Forest Service from caretaker of the national forests to mass provider of raw wood created tension with the agency’s mission to manage for sustained timber yields and favorable water flow conditions. In 1943, Forest Service Chief Lyle Watts warned that the nation was liquidating its national forests,³⁴ estimating that wartime timber cutting exceeded annual growth by 50 percent.³⁵

In the decades following the war, a national housing boom intensified the demand for timber, and the liquidation of the Pacific Northwest’s forests – particularly its old-growth³⁶ – accelerated.³⁷ In the quarter-century after the World War II, timber production on national forest

³² See PAUL W. HIRT, *A CONSPIRACY OF OPTIMISM: MANAGEMENT OF THE NATIONAL FORESTS SINCE WORLD WAR II*, 45 (1994).

³³ *Id.*

³⁴ *Id.* (“More fundamental and far-reaching than the problem of industrial output is the impact of destructive cutting on the growing stock left to produce wood for the future . . . There can be no doubt that the forest capital and hence forest productivity are being impaired by the war”).

³⁵ *Id.*

³⁶ There is no single definition of “old-growth” forest. In the 1970s, the term described Pacific Northwest forests at least 150 or 200 years old that had complex structure, including the presence of large and old live trees, as well as dead trees – called “snags” – and large logs and downed wood, existing both on the forest floor and in streams. The number of forest canopy layers, vertical and horizontal diversity in the canopy, species composition, and ecosystem function are also defining features of old-growth. See Valerie Rapp, *New Findings About Old-Growth Forests*, 4 PAC. N.W. RES. STATION SCIENCE FINDINGS, U.S. FOREST SERV., 1, 2 (June 2003). Mature forests that are 80-200 years old and exhibit old-growth characteristics may also be considered old-growth, especially for the purposes of promoting old-growth development. *Id.* at 6-7.

³⁷ PAUL W. HIRT, *A CONSPIRACY OF OPTIMISM: MANAGEMENT OF THE NATIONAL FORESTS SINCE WORLD WAR II*, 137 (1994); The Forest Service eventually developed a national-scale postwar forest rehabilitation plan that included public regulation of private timber harvesting practices, but Congress never enacted it. *Id.* at 47.

lands increased twelve-fold, and most Forest Service officials wanted to accelerate the pace of harvest even more.³⁸ From 1980 to 1989, the Pacific Northwest's forests west of the crest of the Cascade Mountains provided about a quarter of the nation's softwood harvest.³⁹

By the 1970s, the Forest Service was steeped in controversy for its unsustainable industrial timber harvest practices, especially clearcutting.⁴⁰ But the Northwest's federal forests continued to be logged heavily until the late 1980s when judicial injunctions intervened.⁴¹ This intensive timber harvesting, including on BLM lands, wreaked environmental havoc, particularly from the 1960s through the 1980s: although the OCLA required BLM to sell from O&C lands "not less than one-half billion feet board measure, or not less than the annual sustained yield capacity," the agency regularly sold more than one billion board feet per year.⁴² For example, timber sold from BLM lands rose from 359.8 million board feet in fiscal year 1960 to nearly 1.8 billion board feet sold in fiscal year 1970,⁴³ in large part encouraged by the O&C counties, which had become

³⁸ Miles Burnett & Charles Davis, *Getting Out the Cut: Politics and National Forest Timber Harvests, 1960-1995*, 34 ADMIN. & SOCIETY, 202, 206 (2002) ("Although a few Forest Service officials, such as Aldo Leopold and Bob Marshall, succeeded in pushing the agency to recognize the importance of setting aside some forested lands for recreation or wilderness . . . most higher-ranking administrators were both anxious and willing to accelerate timber harvests").

³⁹ See U.S. DEP'T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-465, *Timber Harvesting, Processing, and Employment in the Northwest Economic Adjustment Initiative Region: Changes and Economic Assistance* 1-2 (Oct. 1999).

⁴⁰ See generally *id.* at 15-37 (detailing the history of national forest planning and explaining that for its first seventy-five years, the Forest Service undertook forest planning with nearly zero direction from Congress); see also *infra* note 51 and accompanying text.

⁴¹ Anne A. Riddle, *Timber Harvesting on Federal Lands* 8 (Cong. Research Serv., R45688, 2020); see also *infra* note 76 (describing the injunctions that halted timber harvests in the region).

⁴² See Scott & Brown, *supra* note 31, at 279 ("By 1987, fifty years after the enactment of the [OCLA], \$1.4 billion in returned revenues had gone to the O&C counties. From the 1960s through the 1980s, the BLM regularly sold more than 1 billion board feet per year."). The harvest levels on the O & C lands are the subject of ongoing litigation. See *infra* notes 243-50 and accompanying text.

⁴³ Anne A. Riddle, *Timber Harvesting on Federal Lands* 14 (Cong. Research Serv., R45688, 2020). Nearly all of BLM's timber harvest occurs on O&C lands. *Id.* at 15.

dependent on timber-sale revenues.⁴⁴ These favorable revenue provisions encouraged O&C counties to maintain low tax rates, which in recent years has caused intermittent suspension of local services like police, fire, libraries, and mental health services.⁴⁵ The O&C counties in effect became a permanent, taxpayer-supported lobby for high timber harvests.⁴⁶ The timber lobby, consisting of not only timber companies but also the O&C counties (with the tacit support of BLM), was highly successful in its persistent push for high harvest levels that enjoyed local citizen support.

II. Change Comes to the Pacific Northwest

In the 1980s, both the Forest Service and BLM were forced to reckon with public sentiment surrounding their resource management priorities when the plight of the northern spotted owl – a bird endemic to the Pacific Northwest’s disappearing old-growth forests – gained national attention.⁴⁷ The northern spotted owl is the very definition of an indicator species, since its existence is dependent on the old-growth forest habitat that the timber industry and its allies were quickly liquating.⁴⁸ The “timber wars” that ensued included a flurry of lawsuits, court-ordered injunctions against timber harvests, and species listings under the ESA, as the long history of

⁴⁴ Congress shared timber revenue from O&C lands with local communities at a higher rate than it did with revenue generated through timber harvest on neighboring Forest Service lands. *See* Blumm & Wigington, *supra* note 27, at 4.

⁴⁵ *See, e.g.*, Gillian Flaccus, *Oregon timber counties struggle to provide services as aid dries up* (May 14, 2017), <https://www.denverpost.com/2017/05/14/timber-industry-oregon-county-services/>.

Arguably, tax breaks for the timber industry that have cost O&C county budgets more than reduced harvests. *See* Tony Schick & Rob Davis, *Oregon lawmakers set out to increase the timber industry’s tax bill. Instead, they cut it again*, Or. Pub. Broadcasting (June 29, 2021), <https://www.opb.org/article/2021/06/29/oregon-timber-industry-tax-bill-legislation/>.

⁴⁶ BLM efforts to exempt the O&C lands from the NFP can be seen as a result of the O&C counties’ successful lobbying. *See infra* notes 224-244 and accompanying text (discussing the 2016 BLM resource management plans and the ensuing litigation).

⁴⁷ *See infra* notes 52-53, 57-59 and accompanying text.

⁴⁸ *See infra* note 54 and accompanying text.

industrial harvesting of the Northwest's public forests came to end.⁴⁹ But not before Congress resisted with two temporary salvage riders that authorized specific timber harvests.⁵⁰

A. The Northern Spotted Owl as an Indicator Species

By the 1980s, the public had become aware of the environmental consequences of the industrial logging of public forests, thrusting the harvest methods of the BLM and Forest Service into the spotlight.⁵¹ The timber industry was politically dominant in the 1980s in the Pacific Northwest, so those concerned about what they viewed as continued overharvests on federal lands theorized that they could best protect old-growth forests (remaining in significant amounts only on Forest Service and BLM lands) by publicly campaigning for the preservation of an animal that

⁴⁹ See *infra* notes 62-68 and accompanying text.

⁵⁰ See *infra* notes 69-72 and accompanying text.

⁵¹ The post-war timber boom coincided with a recreation boom. For example, total recreational visits to national forests skyrocketed from less than 10 million in 1948 to 190 million in 1976. As a result, public opposition to the Forest Service's silviculture practices – particularly clearcutting – created a heated coalescence of competing values among the agency, recreationalists, and environmentalists. See CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST* 137 (1992). The controversy eventually produced litigation, which resulted in a moratorium on clearcutting, imposed by *West Virginia Div. of Izaak Walton League v. Butz*, 367 F.Supp. 422, 433-34 (N.D. W.Va. 1973), *aff'd*, 522 F.2d 945 (4th Cir. 1975) (holding that the 1897 Organic Act, *supra* note 16, required individual marking of trees prior to harvest). The injunction prompted Congress to enact the National Forest Management Act of 1976 (NFMA). 16 U.S.C. § 1600 (1976).

BLM also experienced rising competition among its public land users, and thirty years after creating the agency, Congress responded to calls for public land law reform by enacting the Federal Land Management and Policy Act of 1976 (FLPMA), 43 U.S.C §§ 1701 *et seq.* FLPMA, the BLM's primary governing statute, officially ended the land disposal policies that historically dominated public land law and codified the agency's multiple-use and sustained-yield missions. However, FLPMA contains a clause stating that should a conflict arise between FLPMA and the OCLA with respect to timber management, the OCLA would prevail, *id.* § 1701 note (b), sowing confusion about the limits of FLPMA and the OCLA, although several Interior Solicitor opinions have interpreted the OCLA to be consistent with other laws prescribing multiple use for the O&C lands. See, Memorandum from Associate Solicitor, Division of Energy and Resources to BLM Director, *Technical Revisions of Earlier Opinions Concerning Bureau Management of O and C Lands*, 2 (Aug. 27, 1979); Memorandum from Interior Solicitor to BLM Director, *Review of the BLM Policy Statement for Multiple Use Management of the Oregon and California Railroad and Coos Bay Wagon Road Revested Lands (O&C Lands)*, 7-11 (Sept. 8, 1981); Memorandum from BLM Director to Interior Solicitor, *Policy Statement - Multiple-Use Management of the Oregon and California Railroad Grant Lands (O&C)*, 2-5 (May 14, 1981). But pursuit of multiple-use management on O&C lands conflicted with the financial incentives for O&C counties to continually endorse high levels of timber harvest on BLM lands.

depended on them for its survival.⁵² The northern spotted owl, a small bird endemic to Pacific Northwest's old-growth forests, is an archetypical "indicator species"⁵³ for old-growth ecosystems, because the health of the bird's populations reflects the health of the ancient forests on which it relies.⁵⁴

As the number of old-growth acres continued to plummet, the bird's plight gained public attention when in 1986 the Forest Service proposed "management guidelines" that articulated conservation measures for the species, as required by NFMA and its implementing regulations.⁵⁵ The timber industry considered the proposal, which called for a significant reduction of harvests in spotted owl habitat, to be economically devastating.⁵⁶ On the other hand, environmentalists considered the proposal to be wholly insufficient because even using conservative estimates, the conservation measures would have resulted in the harvesting of 60 percent of the bird's remaining

⁵² See *'Timber Wars' Episode 3: The Owl*, OREGON PUBLIC BROADCASTING (2020), <https://www.opb.org/show/timberwars/>.

⁵³ See 36 C.F.R. § 219.19(a)(1) (1982) ("In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities").

⁵⁴ See WILKINSON, *supra* note 51, at 160 (explaining that the spotted owl is "the best lens we have through which to view the food chain, which in turn allows us to view and understand the whole old-growth ecosystem").

⁵⁵ The 1982 NFMA planning rule required the Forest Service to (1) maintain a "viable population" of existing species, (2) select indicator species for which forest plans would establish objectives for the maintenance and improvement of habitat, and (3) identify habitats critical to threatened or endangered species and prescribe measures to prevent their adverse modification. 36 C.F.R. § 219.19 (1982); see *Seattle Audubon Society v. Evans*, 952 F.2d 297, 300 (9th Cir. 1991). The "management guidelines" called for 550 spotted owl habitat areas, each including up to 2,200 acres of old-growth forest, but the logging of old-growth was permitted to continue rapidly at the rate of 60,000 acres per year. See WILKINSON, *supra* note 51, at 161.

⁵⁶ See WILKINSON, *supra* note 51, at 166 (explaining that loggers' frustrations, while understandable because of the serious social implications of widespread job loss, were misplaced. As the old-growth disappeared, many timber companies had already relocated to the South – taking jobs with them. Also, production became more efficient through mechanization long before concerns about the spotted owl emerged, resulting in thousands of job layoffs. Moreover, allowing the export of unprocessed logs to Asia, instead of requiring processing in the United States, cost far more jobs than environmental protections).

habitat within fifty years.⁵⁷ The proposal generated some 40,000 letters from the public from proponents and critics alike.⁵⁸ During administrative appeals, new scientific evidence emerged that supported the environmentalists' position that the federal government needed to protect significantly more old-growth if the spotted owl was to remain viable as a species.⁵⁹

B. The Endangered Species Act Listings and the Zilly Decisions

Spotted owl advocates were at first reluctant to use the Endangered Species Act (ESA) to protect the owl and old-growth forests, due to concerns that the political and economic implications of listing the owl would cause Congress to amend or repeal the ESA.⁶⁰ But after the Forest Service released its spotted owl management guidelines in 1986,⁶¹ it became clear that NFMA alone would not adequately protect the bird or its habitat. Consequently, in 1987 environmental groups petitioned the U.S. Fish and Wildlife Service (Service) to list the spotted owl under the ESA.⁶²

Under pressure from the timber lobby, the Service denied the petition.⁶³ Environmentalists challenged the denial in court, and in 1988 Judge Thomas Zilly declared the decision not to list the bird to be arbitrary and ordered the Service to reconsider in a scathing decision.⁶⁴ The agency

⁵⁷ *Id.* at 161; U.S. DEP'T OF AGRIC., FOREST SERV., DRAFT SUPPLEMENT TO THE ENVIRONMENTAL IMPACT STATEMENT FOR AN AMENDMENT TO THE PACIFIC NORTHWEST REGIONAL GUIDE: VOL. 1, SPOTTED OWL GUIDELINES (1986).

⁵⁸ WILKINSON, *supra* note 51, at 161.

⁵⁹ *Id.*

⁶⁰ See 'Timber Wars' Episode 3: The Owl, OREGON PUBLIC BROADCASTING (2020), <https://www.opb.org/show/timberwars/>.

⁶¹ U.S. DEP'T OF AGRIC., FOREST SERV., DRAFT SUPPLEMENT TO THE ENVIRONMENTAL IMPACT STATEMENT FOR AN AMENDMENT TO THE PACIFIC NORTHWEST REGIONAL GUIDE: VOL. 1, SPOTTED OWL GUIDELINES (1986).

⁶² See GEORGE C. COGGINS, CHARLES F. WILKINSON, JOHN D. LESHY & ROBERT L. FISCHMAN, FEDERAL PUBLIC LAND AND RESOURCES LAW 714 (7th ed. 2014).

⁶³ *Id.*

⁶⁴ *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479, 483 (W.D. Wash. 1988) ("The Court will reject conclusory assertions of agency 'expertise' where the agency spurns unrebutted expert opinions without itself offering a credible alternative explanation . . . Here, the Service disregarded all the expert opinion on population viability, including that of its own expert, that the owl is facing extinction, and instead merely asserted its expertise in support of its conclusions").

responded by announcing it would list the bird as threatened and did so in June 1990,⁶⁵ although it did not designate critical habitat for the species until 1991, also under court order by Judge Zilly.⁶⁶

C. The Section 318 Rider: Congressional Intervention

In 1989, the same year that Judge Zilly overturned the Service's denial of the petition to list the spotted owl under the ESA, another federal judge sided with environmentalists in a challenge to the Forest Service's failure to protect the species under NFMA and NEPA.⁶⁷ In March 1989, U.S. District Judge William Dwyer preliminarily enjoined all timber sales in western Oregon and Washington national forests until the Forest Service created adequate management guidelines to ensure the owl's viability, complete with NEPA analysis.⁶⁸ This judicial victory was soon eclipsed by a congressional backlash.

In October 1989, Congress enacted section 318 of the Department of the Interior and Related Agencies Appropriations Act of Fiscal Year 1990, a timber industry-supported appropriations rider.⁶⁹ Section 318 – also known as the Hatfield-Adams Northwest Timber

⁶⁵ 50 C.F.R. § 17.11(h) (2021).

⁶⁶ 50 C.F.R. § 17.95(b); *Northern Spotted Owl v. Lujan*, 758 F. Supp. 621 (W.D.Wash. 1991) (ordering the Service to designate critical habitat). See STEVEN L. YAFFEE, *THE WISDOM OF THE SPOTTED OWL* 115-116 (1994); see also WILKINSON, *supra* note 51, at 163 (explaining Judge Zilly's castigation of the agency).

⁶⁷ See *Seattle Audubon Society v. Evans* 771 F. Supp. 1081, 1084 (W.D. Wash. 1991) (*SAS II*) (providing a chronology of the spotted owl litigation that led to Judge Dwyer's regionwide injunction in 1991).

⁶⁸ *Id.* at 1096; KATHIE DURBIN, *TREE HUGGERS: VICTORY, DEFEAT, AND RENEWAL IN THE NORTHWEST ANCIENT FOREST CAMPAIGN* 93 (1996).

⁶⁹ Department of the Interior and Related Agencies Appropriations Act of Fiscal Year 1990, Pub. L. No. 101-121, § 318, 103 Stat. 701, 745-50 (1989). Congress passed the first of these appropriations riders in December 1987 as part of the Department of Interior appropriations act. In response to the near-constant release of new spotted owl studies that indicated a need for more habitat protection, the 1989 rider prohibited judicial review of land management plans for legal challenges based on new information. This provision was the subject of numerous court actions, and the Ninth Circuit held that the rider barred NEPA challenges not only to BLM and Forest Service land management plans, but also to individual timber sales. Michael C. Blumm, *Ancient Forests and the Supreme Court: Issuing a Blank Check for Appropriation Riders* 43 J. URB. & CONTEMP. L., 35, 39-42 (1993); Department of the Interior and Related Agencies Appropriations Act of Fiscal Year 1988, Pub. L. No. 100-202, § 314, 101 Stat. 1329-214, 1329-254 (1987).

Compromise – extended some spotted owl protections,⁷⁰ but it also expressly overrode environmental laws and court-ordered injunctions and ordered the federal land management agencies to sell 7.7 billion board feet (bbf) of timber in the next fiscal year.⁷¹ Ninety-five percent of the resulting sales were in old-growth spotted owl habitat.⁷²

III. THE BIRTH OF THE NORTHWEST FOREST PLAN

The spotted owl controversy raged into the 1990s. In 1991, Judge Dwyer permanently enjoined timber sales in spotted owl habitat until the Forest Service developed and implemented a legally sound conservation plan.⁷³ Additional court actions against the BLM,⁷⁴ the Forest Service, and Fish and Wildlife Service were mounting, while Congress debated old-growth forest protection, economic assistance for displaced workers, and ESA reauthorization bills.⁷⁵ Courts had

⁷⁰ Section 318(b)(1) and (2) of the rider, *supra* note 69, instructed the Forest Service to avoid fragmenting “the most ecologically significant old growth forest stands,” and to minimize fragmentation if harvesting in such areas is necessary to meet the required 7.7 bbf timber yield. Section 318(b)(3) ordered the Forest Service to “review and revise as appropriate” a supplemental EIS and accompanying record of decision examining the effects of timber sales on the spotted owl in light of new information, and to make any necessary changes by Sept. 30, 1990. The provision also protected spotted owl habitat on Forest Service and BLM lands identified in the EIS.

⁷¹ Section 318 faced numerous court challenges, including a trip to the Supreme Court, because of the provision that (1) “disclaimed any intent to judge the ‘legal and factual adequacy’ of the Forest Service and the BLM spotted owl plans,” and (2) asserted that the Hatfield-Adams compromise was consistent with the statutory requirements at issue in the ongoing spotted owl cases. The Supreme Court upheld the provision, barring further judicial review of the spotted owl plans and causing judges to dismiss multiple ongoing cases. *Robertson v. Seattle Audubon Soc’y*, 112 S. Ct. 1407 (1992); *See Blumm, supra* note 69, at 42-44 (explaining section 318 and the legal actions challenging it).

⁷² DURBIN, *supra* note 68, at 109-110. Some of the sales were so egregious that the agencies themselves withdrew them, but the withdrawn sales returned to relevance five years later when Congress passed another timber rider. *Id.* at 109.

⁷³ *See Seattle Audubon Society*, 771 F. Supp. at 1096 (“To bypass the environmental laws, either briefly or permanently, would not fend off the changes transforming the timber industry. The argument that the mightiest economy on earth cannot afford to preserve old-growth forests for a short time, while it reaches an overdue decision on how to manage them, is not convincing today. It would be even less so a year or a century from now”).

⁷⁴ *See Portland Audubon Soc’y v. Lujan*, 795 F. Supp. 1489, 1510 (D. Or. 1992) *aff’d sub nom. Portland Audubon Soc’y v. Babbitt*, 998 F.2d 705 (9th Cir. 1993) (enjoining BLM timber sales in spotted owl habitat on NEPA grounds), *Lane County Audubon Soc’y v. Jamison* 958 F.2d 290 (9th Cir. 1992) (enjoining the BLM’s spotted owl management plan on ESA grounds).

⁷⁵ YAFFEE, *supra* note 66, at 139-140.

halted most timber harvest in the Pacific Northwest indefinitely⁷⁶ when, in 1993, the new Clinton Administration pledged to resolve the controversy it inherited.⁷⁷

Those on both sides of the old-growth conflict realized that the status quo could not continue. Environmentalists and timber interests had been embroiled in a cycle of litigation for years and, while battles were won and lost in the courtroom, it seemed that both the spotted owl and loggers were losing outside of the courthouse doors. For the first time in American history, a regionally focused environmental conflict became a flashpoint in a presidential campaign, bringing candidates George H. W. Bush and Bill Clinton to the Pacific Northwest, espousing dueling promises of ending the timber wars.⁷⁸ As part of his reelection bid, President Bush told applauding lumber towns that he would solve what many called the “spotted owl problem” by dismantling the Endangered Species Act.⁷⁹ Clinton, on the other hand, took no public position on the matter, but assured Pacific Northwest voters that he would hold a summit meeting to achieve comity between economic growth and protecting the environment.⁸⁰

⁷⁶ Court injunctions in effect at the time included: *Seattle Audubon Society v. Evans* 771 F. Supp. 1081 (W.D. Wash. 1991) (*SAS II*), *aff'd*, 952 F.2d 297 (9th Cir. 1991) (enjoining Forest Service timber sales regionwide), *Seattle Audubon Soc’y v. Moseley*, 798 F. Supp. 1473 (W. D. Wash. 1992) (*SAS III*) (finding unlawful the FEIS and ROD on timber sales required by *SAS II* and continuing the regionwide injunction), *Portland Audubon Soc. v. Lujan*, 795 F. Supp. 1489, 1510 (D. Or. 1992) *aff’d sub nom. Portland Audubon Soc. V. Babbitt*, 998 F.2d 705 (9th Cir. 1993) (enjoining BLM timber sales in spotted owl habitat on NEPA grounds), *Lane County Audubon Soc’y v. Jamison* 958 F.2d 290 (9th Cir. 1992) (enjoining the BLM’s spotted owl management plan and future timber sales pending completion of the ESA’s consultation process).

⁷⁷ See GEORGE C. COGGINS, CHARLES F. WILKINSON, JOHN D. LESHY & ROBERT L. FISCHMAN, *FEDERAL PUBLIC LAND AND RESOURCES LAW* 722 (7th ed. 2014).

⁷⁸ See Timothy J. McNulty & Carol Jouzaitis, *Bush, Clinton Try to Balance the Environment and Economy*, Chicago Tribune (Sept. 15, 1992), <https://www.chicagotribune.com/news/ct-xpm-1992-09-15-9203240170-story.html>.

⁷⁹ See *id.*

⁸⁰ See *id.* (“‘If it comes down to a choice between people and owls, Clinton will choose people every time,’ said Bruce Reed, Clinton’s policy director. ‘But we should stop getting into a situation where that is the choice we have to make’”).

On January 20, 1993, Bill Clinton became the 42nd President of the United States. True to his word, months later the newly elected President convened a summit in Portland, Oregon, to negotiate a solution to the spotted owl controversy.⁸¹ Clinton established five principles to guide the interagency effort to protect old-growth forest while ensuring continued federal timber harvests: 1) never forget the human and economic dimensions of the problem; 2) protect the long-term health of the region's forests, which are a public trust; 3) create a plan that is science-based, ecologically sound, and legally tenable; 4) craft a strategy that provides for a "predictable and sustainable" level of timber sales without degrading or destroying the environment; and 5) "make the federal government work together and work for you."⁸²

A. The Portland Timber Summit

President Clinton's "Timber Summit" was held in Portland, Oregon just months after his inauguration.⁸³ The summit was remarkable in that the attendees included the president himself, Vice President Al Gore, Interior Secretary Bruce Babbitt, Agriculture Secretary Mike Espy, Labor Secretary Robert Reich, and several other cabinet members.⁸⁴ With the nation watching on television, these top level officials convened around a conference table with scientists, environmentalists, economists, timber industry executives, loggers, labor union representatives, local officials, and tribal leaders:⁸⁵ there were perhaps more cabinet members in one room than

⁸¹ YAFFEE, *supra* note 66, at 141.

⁸² See U.S. DEP'T OF AGRIC., FOREST SERV. & BUREAU OF LAND MGMT., RECORD OF DECISION FOR AMENDMENTS TO FOREST SERV. AND BUREAU OF LAND MGMT. PLANNING DOCUMENTS WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL 3 (1994) [hereinafter NFP RECORD OF DECISION].

⁸³ YAFFEE, *supra* note 66, at 141.

⁸⁴ DURBIN, *supra* note 68, at 195.

⁸⁵ *Id.*; See also YAFFEE, *supra* note 66, at 142. ("The handpicked panelists included twenty-one representatives of timber . . . four fisheries groups, nine environmentalists, six scientists, a handful of local and state government representatives, two economists, two sociologists, one vocational counselor, and the Archbishop of Seattle"). To reduce political grandstanding, notably absent from the guest list were Forest Service and BLM officials and the Northwest congressional delegation. DURBIN, *supra* note 68, at 195; See also YAFFEE, *supra* note 66, at 142 ("This approach reduced the amount of grandstanding at the conference,

any time outside of a State of the Union address. Holding an event of this magnitude for a seemingly local issue⁸⁶ was unprecedented.⁸⁷

B. FEMAT: Science versus Economics and Politics

At the end of the day-long Timber Summit, President Clinton called for three interagency working groups to devise a workable solution within sixty days.⁸⁸ One of them, the Forest Ecosystem Management Assessment Team (FEMAT), led by respected Forest Service biologist Jack Ward Thomas,⁸⁹ focused on science-based land management strategies.⁹⁰ The other two teams addressed economics, labor and community assistance, and interagency coordination.⁹¹ The three groups had their work cut out for them: Clinton called for the plan to address the needs of loggers and their communities, protect forest health, rely on sound science, and provide a sustainable and predictable level of timber consistent with the other principles.⁹²

offset the need for many participants to defend past actions, and focused many of the presentations on the kind of personal stories cherished by the President and loved by the media”).

⁸⁶ Many saw the spotted owl controversy narrowly – as an environmentalists vs. loggers problem – but President Clinton reframed the issue as about more than the spotted owl, defining the problem as “how to protect a broad range of environmental values within the old-growth ecosystem while dealing humanely within a regional economy that was undergoing a normal process of transformation.” See YAFFEE, *supra* note 66, at 142.

⁸⁷ ‘*Timber Wars*’ Episode 5: *The Plan*, OREGON PUBLIC BROADCASTING (2020), <https://www.opb.org/show/timberwars/> (explaining that an event that included the president, his or her top officials and myriad stakeholders convening to solve a region-specific problem had never before taken place, nor has the country seen anything like it since).

⁸⁸ YAFFEE, *supra* note 66, at 143.

⁸⁹ Jack Ward Thomas was an elk biologist, not an ornithologist, but the Forest Service requested that he work on the spotted owl issue because of his expertise in population dynamics. He worked alongside fellow researchers Eric Forsman and Jerry Franklin since the conflict’s inception. *Id.* at 27, 59. Thomas and Franklin produced pioneering studies on old-growth ecosystems, and Forsman conducted some of the first research on the northern spotted owl for his master’s thesis in 1975, which identified the size and status of its population and named the bird an indicator species. *Id.* at 59, 27; see also *infra* note 98 (identifying the so-called “Gang of Four” consisting of Jack Ward Thomas, Jerry Franklin, Norm Johnson, and John Gordon).

⁹⁰ YAFFEE, *supra* note 66, at 144.

⁹¹ *Id.*

⁹² *Id.* at 143. Any plan constructed by the working groups also had to conform to federal administrative and environmental laws. BLM and the Forest Service formed a working group to examine the FEMAT options and ensure they were legally sound so they would not be rejected by Judge Dwyer. *Id.* at 144.

Clinton directed FEMAT, which he called the “centerpiece of the post-conference effort,” to pursue an ecosystem-scale approach to forest management, preserve biodiversity beyond maintaining the viability of the spotted owl, and account for the connections between various ecosystem segments.⁹³ Significantly, the president also required that FEMAT to address the marbled murrelet,⁹⁴ anadromous fish,⁹⁵ and other old-growth dependent species.⁹⁶ Finally, the plan had to be economically and politically viable.⁹⁷ The team relied heavily on prior analyses produced by the Interagency Scientific Committee (ISC) and the so-called “Gang of Four,” a previously established working group that included several soon-to-be FEMAT appointees.⁹⁸ The FEMAT report identified ten strategies, and President Clinton selected “Option 9” for implementation in

⁹³ *Id.*

⁹⁴ In 1992, the Fish and Wildlife Service listed the marbled murrelet, an old-growth dependent seabird that nests in the tops of ancient coastal redwoods, as a threatened species under the ESA. 50 C.F.R. 17.95(b) (1992).

⁹⁵ In pre-conference negotiations, the Northwest congressional delegation tried to keep salmon issues off the Summit’s agenda, “but presentations at the conference made the very logical connection that one segment of the economy may well benefit from changes in other segments of the economy: Salmon stocks could improve as logging declined and management practices changed.” YAFFEE, *supra* note 66, at 142-43.

⁹⁶ *Id.* at 144.

⁹⁷ As FEMAT’s deliberations began, Clinton’s biodiversity preservation goals quickly proved to conflict with economic and political viability. *See* DURBIN, *supra* note 68, at 203.

⁹⁸ In July 1991, a congressional panel, including Thomas and Franklin, *supra* note 89, plus Dean of Yale Forestry School, John Gordon, and Norm Johnson, a professor of forest management at Oregon State University – dubbed the “Gang of Four” – examined possible solutions to the controversy. *Id.* at note 82. Their report indicated that nothing less than the protections proposed previously by the Interagency Science Committee would keep the spotted owl from going extinct. *Id.* at 145. Earlier, in 1989, the Forest Service established the ISC to help the agency “regain the high ground of technical credibility,” charging the committee with studying spotted owl management strategies. *Id.* at 123. Thomas and Forsman were both members of the committee. Its final report called for high levels of habitat protection and was not well received by the agencies. The Bush administration asked government scientists to discredit it, but they could not. *See id.* at 124; WILLIAM DIETRICH, *THE FINAL FOREST: THE BATTLE FOR THE LAST GREAT TREES OF THE PACIFIC NORTHWEST* 224 (1992). Although Congress never enacted the NFP as legislation, the ISC’s recommendations lent legitimacy to scientists’ calls for preservation and to the Service’s decision to list the spotted owl in 1990. *See* YAFFEE, *supra* note 66, at 126.

July 1993.⁹⁹ Option 9 was the only strategy predicted to provide an annual timber yield greater than 1.0 billion board feet (bbf), while appearing to satisfy ecological objectives.¹⁰⁰

Hundreds of researchers – including biologists, social scientists, and economists – worked tirelessly for sixty days to carry out President Clinton’s promise to end the timber wars. The result was the Northwest Forest Plan (NFP): the world’s first large-scale ecosystem management plan.¹⁰¹ Before he announced his strategy, Clinton stated, “I will try to be fair to the people whose livelihoods depend on this, and fair to the environment that we are all obligated to maintain.”¹⁰² But he predicted that neither side would be happy with the solution.¹⁰³ He was right.

C. The Dwyer Decision

The Portland Timber Summit produced a landscape-scale ecosystem management plan that covered 24.4 million acres of federal land and aimed to preserve and restore the biodiversity of federal forests, while establishing a goal of 1.2 bbf of timber annually for harvest.¹⁰⁴ The NFP

⁹⁹ See YAFFEE, *supra* note 66, at 145-147 (explaining that most of the ten options were based largely on strategies identified by the Gang of Four, and only options one through five and nine would satisfy the objective of protecting old-growth dependent species. Option 9 was projected to cost the least jobs and was constructed at the end of the FEMAT process).

¹⁰⁰ Option 9’s harvest levels were not the maximum harvest levels considered, but they were the highest that also met viability concerns. The FEMAT report predicted that Option 9 could supply over 1.0 bbf of timber annually if the strategy incorporated adaptive management. *Id.* at 146; U.S. DEP’T OF AGRIC., FOREST SERV., U.S. DEP’T OF THE INTERIOR, BUREAU OF LAND MGMT., FISH & WILDF. SERV., NATL. PARK SERV., U.S. DEP’T OF COMMERCE, NATL. OCEANIC & ATMOSPHERIC ADMIN., NATL. MARINE FISHERIES SERV., ENV. PROTECTION AGENCY, FOREST ECOSYSTEM MANAGEMENT: AN ECOLOGICAL, ECONOMIC, AND SOCIAL ASSESSMENT, REPORT OF THE FOREST ECOSYSTEM MANAGEMENT ASSESSMENT TEAM 29-30, 52 (July 1993) [hereafter FEMAT REPORT].

¹⁰¹ See *infra* notes 116-118 and accompanying text.

¹⁰² See Timothy Egan, *Clinton, Planning Forest Conference, Hope to Free Logjam in Northwest*, N.Y. TIMES, March 27, 1993, <https://www.nytimes.com/1993/03/27/us/clinton-planning-forest-conference-hopes-to-free-logjam-in-northwest.html>.

¹⁰³ *Id.*; ‘*Timber Wars*’ Episode 5: *The Plan*, OREGON PUBLIC BROADCASTING (2020), <https://www.opb.org/show/timberwars/>.

¹⁰⁴ See Lauren M. Rule, *Enforcing Ecosystem Management under the Northwest Forest Plan: The Judicial Role*, 12 FORDHAM ENVTL. L.J. 211, 223 (2000). See also YAFFEE, *supra* note 66, at 58-59 (explaining the basic principles of conservation biology, and how the relatively young discipline provided land managers with a new understanding of how to manage forests for biodiversity).

attempted to accomplish these goals through land allocations, an aquatic conservation strategy (ACS), requirements to survey forests for certain rare wildlife species before harvest, and a monitoring program.¹⁰⁵ But, as President Clinton foresaw, neither environmentalists nor the timber industry were satisfied with it.

The NFP met its judicial fate in December 1994 in the courtroom of Judge William Dwyer.¹⁰⁶ Judge Dwyer marveled at the unparalleled effort of the Administration to resolve such a complex problem, and he upheld the plan as consistent with the ESA, NEPA, and NFMA.¹⁰⁷ Timber industry lawyers challenged the agencies' authority to create an ecosystem management plan,¹⁰⁸ but Judge Dwyer observed that nothing short of an ecosystem-scale approach to the issue would comply with environmental laws.¹⁰⁹ He remarked that relevant statutes and prior court

¹⁰⁵ *Id.*; see *infra* Part IV (detailing the NFP's provisions).

¹⁰⁶ Judge William Dwyer (1929-2002) had a reputation for intelligence, fairness, and integrity. He was nominated for a seat on the federal District Court for the Western District of Washington by President Ronald Reagan in 1987. As an attorney, Dwyer – who was born and raised in Washington state – had represented a wide variety of clients, including a state representative who had been defamed by right wing propaganda, a Black Panther captain, wrongful eviction victims, and even King County in a suit that is primarily the reason that Seattle has maintained a professional baseball team. Many of the cases he took as an attorney set important precedents and informed policy decisions, and the same was true for his decisions as a judge. Notable cases tried in Judge Dwyer's courtroom included the nation's first murder trial under a federal law that made product tampering a crime, a suit that settled ownership rights of the late rock n' roll legend Jimi Hendrix's music, an employment class action against tech giant Microsoft that resulted in a \$97 million settlement, and an appeal in which he set aside the death penalty for a defendant whose counsel performed too poorly to satisfy his Sixth Amendment right to counsel. Judge Dwyer was searching and exacting, and did not shy away from complex environmental cases. He presided over much of the spotted owl litigation that led to the NFP, as well as the subsequent litigation challenging it. See John Caldbick, *Dwyer, William L. (1929-2002)*, HISTORY LINK (Jan. 31, 2013), <https://www.historylink.org/File/5338>; see also *supra* notes 68, 92 and accompanying text.

¹⁰⁷ *Seattle Audubon Society v. Lyons*, 871 F. Supp. 1291, 1300 (W. D. Wash. 1994), *aff'd*, 80 F.3d 1401 (9th Cir. 1996).

¹⁰⁸ A plaintiff in the case, the Northwest Forest Resource Council, is a trade association representing loggers, mill owners, and others in the timber industry, now known as the American Forest Resources Council (AFRC). See *id.* at 1299-1300, 1310-1311. AFRC is involved in the ongoing litigation over timber harvests on O & C lands. See *infra* notes 242-50 and accompanying text.

¹⁰⁹ *Id.* at 1310-11 (“Given the current condition of the forests, there is no way the agencies could comply with the environmental laws *without* planning on an ecosystem basis”) (emphasis in original). Environmentalists contended that the plan was not protective enough and asked the court to remand the matter to the agencies and in the meantime to enjoin all timber sales in spotted owl habitat. *Id.* at 1300.

orders required BLM, the Forest Service, and the Fish and Wildlife Service to work collaboratively to meet environmental and resource-use objectives.¹¹⁰ And he stressed that despite the unknowns inherent in forecasting the myriad effects of a landscape-scale plan, the plan appeared to be the best vehicle to meet the legal and scientific needs of contemporary forest management.¹¹¹

Dwyer was satisfied by the efforts of the federal agencies he castigated in previous years for what he perceived to be a gross mishandling of a complex social issue.¹¹² He had noted in prior litigation that no individual species caused the timber industry's decline: long before the small reclusive spotted owl took the national stage, loggers lost jobs due to mechanization and the nation's increased export of raw logs.¹¹³ To Judge Dwyer, the question was when – not if – the

¹¹⁰ *Id.* at 1311 (“The courts have repeatedly encouraged the Forest Service, the BLM, and Service to turn from disparate strategies for managing LSOG forests to a cooperative approach”). In 2016, BLM revised its governing resource management plans (RMPs) to remove most O&C lands from the obligations of the NFP. BUREAU OF LAND MANAGEMENT, U.S. DEP’T OF THE INTERIOR, NORTHWESTERN AND COASTAL OREGON RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN 2, 28 (2016) [hereinafter “2016 RMPs”] (“This RMP revision revises the 1995 RMPs in their entirety and thereby revises the Northwest Forest Plan for the management of BLM-administered lands [The] goal of the Northwest Forest Plan was founded on a U.S. Forest Service organic statute and planning regulation, which did not and do not apply to the BLM, and is not a part of the purpose for this RMP revision”). See *infra* notes 224-244 and accompanying text (discussing the revised RMPs and the ensuing litigation).

¹¹¹ *Seattle Audubon Society*, 871 F. Supp. at 1303 (“FEMAT assessed the predicted effects of the ten options on more than a thousand animal and plant species for the next century—an unparalleled effort”).

¹¹² *Id.* at 1300 (“The order now entered . . . will mark the first time in several years that the owl-habitat forests will be managed by the responsible agencies under a plan found lawful by the courts. It will also mark the first time that the Forest Service and BLM have worked together to preserve ecosystems common to their jurisdictions”). Judge Dwyer warned, however, that “any more logging sales than the plan contemplates would probably violate the laws” and “whether the plan and its implementation [would] remain legal [depended] on future events and conditions.” *Id.* Concerning the allegations that the agencies violated NEPA, Dwyer stated that “[c]areful monitoring will be needed to assure that the plan, as implemented, maintains owl viability. New information may require that timber sales be ended or curtailed. But on the present record, the [final supplemental] EIS adequately discloses the risks and confronts the criticisms as required by NEPA.” *Id.* at 1321.

¹¹³ See *Seattle Audubon Society*, 771 F. Supp. at 1095 (“Over the past decade many timber jobs have been lost and mills closed in the Pacific Northwest. The main reasons have been modernization of physical plants, changes in product demand, and competition from elsewhere. Supply shortages have also played a part. Those least able to adapt and modernize, and those who have not gained alternative supplies, have been hardest hit by the changes. . . . A social cost is paid whenever an economic transformation of this nature takes place, all the more so when a largely rural industry loses sizeable numbers of jobs”).

industry would need to respond to changed societal conditions and values.¹¹⁴ He concluded that the NFP was a lawful step in the right direction.

IV. THE NORTHWEST FOREST PLAN'S PROVISIONS

The NFP allocates federal land in seventeen national forests and six national parks¹¹⁵ into seven categories, each imposing different management standards.¹¹⁶ The plan includes the Aquatic Conservation Strategy (ACS) for managing aquatic processes and habitat as well as a survey and manage program (S&M) requiring land managers to conduct regular surveys, buffer, and monitor for rare wildlife before going forward with potentially harmful activities.¹¹⁷ The plan also incorporates principles of adaptive management and a regional monitoring program.¹¹⁸

¹¹⁴ See *supra* notes 73 and 113.

¹¹⁵ See *supra* note 110 (explaining that BLM removed four out of its seven districts in the plan area from the NFP's requirements in its 2016 resource management plans). The NFP called for interagency coordination, but it did not require coordination with counties. See U.S. DEP'T OF AGRIC., FOREST SERV. & BUREAU OF LAND MGMT., RECORD OF DECISION FOR AMENDMENTS TO FOREST SERV. AND BUREAU OF LAND MGMT. PLANNING DOCUMENTS WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL 53-54 (1994) [hereinafter NFP RECORD OF DECISION]. See also Michael C. Blumm & James A. Fraser, "Coordinating" with the Federal Government: Assessing County Efforts to Control Decisionmaking on Public Lands 38 PUB. LAND & RES. L. REV. 1, 4 (2017) (explaining that county directives that conflict with federal land management plans are preempted by federal law and unenforceable while producing increased hostility between rural residents and the federal government).

¹¹⁶ NFP RECORD OF DECISION, *supra* note 115, at 6-7. The NFP applied to BLM lands managed under the Oregon & California Lands Act of 1937 (OCLA) until 2016, when BLM revised its governing RMPs to remove itself from the NFP's obligations. See *infra* note 110. Although in *Headwaters, Inc. v. Bureau of Land Management, Medford District*, 914 F.2d 1174 (9th Cir. 1990), the Ninth Circuit interpreted the OCLA as a dominant-use statute prioritizing timber production, more recent case law and a review of the legislative history reveals that the OCLA is in fact a multiple-use statute. See Blumm & Wigington, *supra* note 27, at 9-10; Scott & Brown, *supra* note 31, at 284-85 ("Headwaters is the high-water mark, establishing the most conservative interpretation of the O&C Act, and curtailing—erroneously—the BLM's authority to manage O&C lands for non-timber purposes. But the courts also have not allowed BLM or the timber industry to use the O&C Act to avoid following NEPA, the [ESA], and other federal environmental statutes, thus limiting the significance of *Headwaters*. Because the courts have not reexamined the assumptions upon which *Headwaters* is based, the underlying fallacy regarding the O&C Act's 'dominant use' prescription remains"); see also *infra* notes 352-53 and accompanying text.

¹¹⁷ NFP RECORD OF DECISION, *supra* note 115, at 9-11.

¹¹⁸ U.S. DEP'T OF AGRIC., FOREST SERV. & BUREAU OF LAND MGMT., STANDARDS AND GUIDELINES FOR MANAGEMENT OF HABITAT FOR LATE-SUCCESSIONAL AND OLD-GROWTH FOREST RELATED SPECIES WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL E-1, E-12 (1991) [hereinafter NFP STANDARDS & GUIDELINES].

A. Land Allocations

Congressionally-reserved allocations comprise over 7.25 million acres (33 percent of the federal land in the NFP); the plan prohibits timber harvests in these areas, which include wild and scenic rivers, wilderness areas, and national parks and monuments.¹¹⁹ Late-successional reserves (LSRs) amount to slightly more than 6.5 million acres (30 percent), which are reserved from most programmed timber harvest. The plan generally restricts management activities in LSRs unless the purpose is to enhance the development of old-growth forest characteristics.¹²⁰ Managed LSRs comprise 102,000 acres (less than one percent), which are dedicated to forest restoration and maintenance to achieve optimum levels of late-successional and old-growth stands where regular wildfire occurs.¹²¹ Administratively-withdrawn areas amount to over 1.1 million acres (5 percent), including lands previously removed from timber harvest for recreation, visual protection, back country uses, or because timber harvest is infeasible.¹²² Riparian reserves comprise roughly 2.1 million acres (10 percent), providing buffers along waterways to enhance habitat for riparian species and provide protected dispersal corridors for terrestrial species.¹²³ Adaptive management areas include over 1.5 million acres (7 percent), allowing for testing new management strategies and integration of ecological, economic, and other social and community objectives.¹²⁴ The plan

¹¹⁹ NFP RECORD OF DECISION, *supra* note 115, at 6. The percentages provided above reflect approximate acreages for each allocation after the BLM removed itself from the plan. *See supra* note 110 and accompanying text (explaining the BLM's withdrawal from the plan).

¹²⁰ *Id.*; *see supra* note 36 (describing old-growth characteristics).

¹²¹ *Id.* Managed LSRs possess known spotted owl activity centers and unmapped protection buffers designed to protect rare species. Silviculture and fire-hazard reduction treatments are permissible uses on these acres. *Id.*

¹²² *Id.*

¹²³ *Id.* at 7.

¹²⁴ *Id.* at 6. The plan did authorize some commercial timber harvests in adaptive management areas, but with an emphasis on ecological objectives. *Id.*; *see also infra* notes 157-58 and accompanying text (explaining that forest managers eventually treated adaptive management areas similarly to matrix lands, the allocation that prioritizes timber harvest).

envisioned that most of the timber harvest would occur outside of these reserved areas, in so-called “matrix lands,” which include about 3.28 million acres (15 percent).¹²⁵

When implemented in 1994, the land management agencies estimated that the NFP could result in the harvest of roughly 1.1 billion board-feet (bbf) of timber annually, although meeting that goal quickly proved unrealistic.¹²⁶ Timber interests subsequently labeled the plan a “broken promise,” construing the 1.1 bbf estimate as a firm commitment instead of an estimate of potential production.¹²⁷

B. The Aquatic Conservation Strategy

The ACS is a science-based inquiry into the effect of proposed management activities on the riparian environment. Its goal is to restore and maintain the health of aquatic ecosystems within the range of the spotted owl and of Pacific Ocean anadromy by continuously monitoring watershed conditions and protecting riparian areas from the effects of management activities.¹²⁸ The

¹²⁵ NFP RECORD OF DECISION, *supra* note 115, at 6-7;

¹²⁶ *Id.* at 24. See GEORGE C. COGGINS, CHARLES F. WILKINSON, JOHN D. LESHY & ROBERT L. FISCHMAN, FEDERAL PUBLIC LAND AND RESOURCES LAW 726 (7th ed. 2014) (“From the beginning, the timber harvest, which had averaged about four billion board feet annually during the 1980s, failed to meet the plan’s annual goal of one billion board feet ... much less than Interior Secretary Babbitt’s estimate of two billion board feet in the first year.”).

¹²⁷ COGGINS, et al., *supra* note 126, at 727; see also Thomas A. Spies et. al, *Twenty-five years of the Northwest Forest Plan: what have we learned?*, 17 FRONTIERS IN ECOLOGY & THE ENV. 511, 516 (2019) (“planners of timber outputs under the plan ‘expected much of it to come from old-growth trees using methods somewhat similar to clearcutting . . . They based their calculations on assumptions about public acceptability that didn’t hold up’”). Notably, the plan relied heavily on adaptive management to accomplish its harvest goals, but the agencies did not implement adaptive management as FEMAT had envisioned. See *infra* notes 149-158 and accompanying text.

¹²⁸ The ACS seeks to both maintain and restore (1) distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species are adapted; (2) spatial and temporal connectivity within and between watersheds; (3) physical integrity; (4) water quality; (5) sediment input, storage, and transport; (6) instream flows; (7) timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands; (8) riparian plant-species composition and structural diversity; and (9) habitat to support well-distributed populations of native, aquatic and riparian-dependent species of plants, invertebrates, and vertebrates. FEMAT emphasized that the affected aquatic ecosystems could show improvements in ten to twenty years, but that it might take up to a century to meet all objectives because the approach is based on natural disturbance processes that operate on very long timeframes. See U.S. DEPT. OF AGRIC., U.S. FOREST SERV. & BUREAU OF LAND MGMT., FINAL

provision applies to all federal lands within the plan area,¹²⁹ even those protected from logging.¹³⁰

The ACS is concerned with more than site-specific effects of proposed actions, for it concerns four spatial scales – region, river basin, watershed, and individual sites – and contains four main components: riparian reserves, key watersheds, watershed analysis, and watershed restoration.¹³¹

The ACS imposes buffers around water features to protect them from adverse effects of management activities within “riparian reserves.”¹³² In these reserves, agencies must meet specific requirements for timber harvesting, road construction and maintenance, grazing, recreation, minerals management, fire and fuels management, research, and restoration activities.¹³³

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT ON MANAGEMENT OF HABITAT FOR LATE-SUCCESSIONAL AND OLD-GROWTH FOREST RELATED SPECIES WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL APPENDIX B6 AQUATIC CONSERVATION STRATEGY B-82-83 (1994) [hereinafter ACS PLANNING DOCUMENT] (describing in full the ACS’s objectives).

¹²⁹ When the BLM revised its Western Oregon land management plans in 2016, which effectively removed those lands from the NFP’s jurisdiction, the agency included in those revisions significant reductions in watershed protections on BLM lands. BLM asserted that the revised plans “[address] all four components of the [ACS] ... but [have] modified and updated several components,” including reducing buffer widths along streams to make more land available for timber harvest. The modified ACS only applies instream: it does not apply across the watershed to larger watershed processes such as maintaining peak flows that are influenced by upland vegetation manipulation. U.S. DEPT. OF INT., BUREAU OF LAND MGMT., NORTHWESTERN & COASTAL OREGON RECORD OF DECISION AND RESOURCE MANAGEMENT PLAN 25 (2016); U.S. DEPT. OF INT., BUREAU OF LAND MGMT., SOUTHWESTERN OREGON RECORD OF DECISION AND RESOURCE MANAGEMENT PLAN 24 (2016).

¹³⁰ ACS PLANNING DOCUMENT, *supra* note 128, at B-81.

¹³¹ NFP RECORD OF DECISION, *supra* note 115, at 9; *see also* ACS PLANNING DOCUMENT, *supra* note 128, at B-82 (“The Assessment Team believed that any species-specific strategy aimed at defining explicit standards for habitat elements would be insufficient for protecting even the targeted species. To succeed, any aquatic conservation strategy must strive to maintain and restore ecosystem health at watershed and landscape scales”).

¹³² Buffer width and management requirements vary depending on the nature of the waterway. Categories include fish-bearing streams; permanently flowing non-fish-bearing streams; lake or natural ponds; constructed ponds, reservoirs, or wetlands greater than one acre; seasonally flowing or intermittent streams; wetlands less than one acre; and unstable areas. NFP RECORD OF DECISION, *supra* note 115, at 9.

¹³³ NFP RECORD OF DECISION, *supra* note 115, at 9; Specific requirements for land management in riparian reserves include allowing timber harvest only in the event of catastrophic events such as fire, flooding, volcanic, wind, or insect damage, and allowing salvage and fuelwood cutting only if required to attain ACS objectives. Silviculture practices may be applied to control stocking, reestablish and manage stands, and to attain vegetation characteristics required to meet ACS objectives. Requirements for road management include minimizing road construction in riparian reserves and meeting criteria to ensure that reaching ACS objectives will not be adversely affected. Managers must also provide fish passage at all fish-bearing or potentially fish-bearing streams and maintain road culverts. Grazing practices must be adjusted or

Designated “key watersheds” primarily serve as refugia for at-risk anadromous salmonids, bull trout, resident fish, and other aquatic species.¹³⁴ “Watershed analysis” requires characterization of aquatic, riparian, and terrestrial features within a watershed, and is used to refine riparian boundaries, prescribe land management activities, and develop monitoring programs.¹³⁵ “Watershed restoration” is a long-term program designed to restore degraded watershed habitat.¹³⁶

Watershed analysis is a key component of the ACS because it establishes a baseline of existing conditions and physical and biological processes in watershed ecosystems upon which land managers must base watershed restoration proposals.¹³⁷ Watershed analysis supplements the NEPA process because it often provides the data used in site-specific NEPA analyses.¹³⁸

eliminated for consistency with the ACS, and minerals operations require reclamation plans. *See* NFP STANDARDS & GUIDELINES, *supra* note 118, at C-31-37.

¹³⁴ NFP RECORD OF DECISION, *supra* note 115, at 10. The plan classified key watersheds as Tier 1, Tier 2, or non-key. Tier 1 watersheds prioritize at-risk species and Tier 2 watersheds contain no at-risk fish, but have high water quality. *Id.*; *see also* Michael C. Blumm, *The Amphibious Salmon: The Evolution of Ecosystem Management in the Columbia River Basin*, 24 *ECOLOGY L.Q.* 653, 670 (1997) (describing the ACS provisions).

¹³⁵ NFP RECORD OF DECISION, *supra* note 115, at 10.

¹³⁶ *Id.* (“The most important components are control and restoration of road-related runoff and sediment production, restoration of riparian vegetation, and restoration of in-stream habitat complexity . . . In-stream restoration . . . will be accompanied by upslope and riparian restoration to achieve long-term watershed restoration”).

¹³⁷ *See* Blumm, *supra* note 134, at 670 (calling watershed analysis the “linchpin” in the NFP). Like NEPA’s requirement that federal land managers follow specific procedures to evaluate and disclose the environmental effects of proposed actions, the ACS prescribes procedures land managers must follow when planning projects in aquatic areas. The ACS requires land managers to evaluate existing and proposed projects in light of habitat maintenance and improvement objectives. Further, a proposed or existing action cannot “retard or prevent attainment” of those objectives. Therefore, the ACS amounts to a kind of substantive NEPA, requiring not only process, but also environmentally beneficial results. *See* ACS PLANNING DOCUMENT, *supra* note 128, at B-83-84 *and cf.* 40 CFR § 1500.1 (2019) (NEPA does not require particular results but instead environmental analysis and public disclosure); *see also* Rule, *supra* note 104 at 223-24 (“While the FEMAT report stated that the most comprehensive analyses are conducted at the watershed level, the report stressed that ‘information collected at the finer scales provides early warning of likely future problems at the broader scales.’ Watershed analysis would seem to be such an integral part of the NEPA process that it should be included when the Biden administration revises the NEPA regulations. *See* Kelsey Brugger, *CEQ postpones agency deadline for Trump NEPA rules*, *E&E NEWS* (June 28, 2021), <https://subscriber.politicopro.com/article/eenews/1063735983>.

¹³⁸ *See* Blumm, *supra* note 134, at 670 (describing the interaction between watershed analyses and NEPA and noting that “the plan also authorizes public participation, although the degree of public involvement will vary depending on the issue . . .”).

C. Survey and Manage

The survey and management (S&M) requirement applies to all ground-disturbing activities within all land allocations – whether a timber harvest on matrix land or a restoration project in a late-successional reserve aiming to promote the health of at-risk wildlife populations.¹³⁹ When S&M species may be present in an area in which management activities will occur, land managers must conduct on-the-ground, site-specific surveys for hundreds of rare species,¹⁴⁰ as well as create protective buffers around wildlife habitat when management recommendations for the species so require.¹⁴¹ In addition to conducting S&M surveys prior to ground-disturbing activities, managers also must conduct regular “strategic surveys” to gather information at the landscape, population, or site-specific scale for each S&M species.¹⁴²

¹³⁹ NFP STANDARDS & GUIDELINES, *supra* note 118, at C-4 (including populations of mammals, amphibians, bryophytes, mollusks, vascular plants, fungi, lichen, and arthropods). Species protected by the S&M provision must meet three criteria: 1) occur within or close to the NFP area and have potentially suitable habitat within it; 2) be closely associated with late-successional and old-growth forests; and 3) the reserve system and other provisions of the NFP must appear insufficient to protect the species. U.S. FOREST SERV. & BUREAU OF LAND MGMT., RECORD OF DECISION AND STANDARDS AND GUIDELINES FOR AMENDMENTS TO THE SURVEY & MANAGE, PROTECTION BUFFER, AND OTHER MITIGATION MEASURES STANDARDS AND GUIDELINES 3 (Jan. 2001) [hereinafter 2001 AMENDMENTS ROD].

¹⁴⁰ NFP STANDARDS & GUIDELINES, *supra* note 118, at C-5. The plan placed species into three different categories: 1) pre-disturbance surveys are practical, 2) pre-disturbance surveys are not practical, and 3) status undetermined. Survey prescriptions aim to ascertain whether a species is rare or uncommon. 2001 AMENDMENTS ROD, *supra* note 139, at 7.

¹⁴¹ The Plan’s protective buffers seek to mitigate the effects of timber harvests on specified rare species located outside of reserves. Buffers create no-harvest zones in areas where “Protection Buffer species” are found. U.S. DEPT. OF AGRIC., U.S. FOREST SERV. & BUREAU OF LAND MGMT., 1 FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR AMENDMENT TO THE SURVEY & MANAGE, PROTECTION BUFFER, AND OTHER MITIGATION MEASURES STANDARDS AND GUIDELINES 81 (Nov. 2000) [hereinafter S&M AMENDMENTS SEIS]; U.S. DEPT. OF AGRIC., U.S. FOREST SERV. & BUREAU OF LAND MGMT., FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT ON MANAGEMENT OF HABITAT FOR LATE-SUCCESSIONAL AND OLD-GROWTH FOREST RELATED SPECIES WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL B-63 (1994) [hereinafter NFP SEIS].

¹⁴² 2001 AMENDMENTS ROD, *supra* note 139, at 9-10. *See also* S&M AMENDMENTS SEIS, *supra* note 141, at 50 (“Information provided by strategic surveys ... will help address fundamental questions of Survey and Manage species, including: is there a concern for persistence; is the species rare or uncommon; what is the appropriate management for the species; and, do the reserve land allocations and other standards and guidelines of the Northwest Forest Plan provide a reasonable assurance of species persistence?”).

The S&M provisions proved quite consequential because of the expense of the surveys it required and the limitations the program placed on timber harvests.¹⁴³ In 2001, the BLM and Forest Service amended the provision because of numerous legal challenges¹⁴⁴ and implementation difficulties,¹⁴⁵ which encouraged the recently elected Bush Administration to attempt to increase timber harvests.¹⁴⁶ The amendment sought to reduce the administrative burden of the S&M program by removing seventy-two species from the rare species list while endorsing the agencies' authority to add and remove of species from the list.¹⁴⁷ It would not be the last attempt to amend the S&M program to "streamline" its implementation.¹⁴⁸

D. Adaptive Management and Monitoring

¹⁴³ See Blumm & Wigington, *supra* note 27, at 11 ("Largely due to the S&M requirements, the amount of timber available for commercial harvest plummeted from 4.5 billion board feet per year in the late 1980s to approximately 0.96 billion board feet per year in the 2000s").

¹⁴⁴ See *infra* Section V for discussion of legal challenges to the S&M provision.

¹⁴⁵ For example, in some instances the agencies simply lacked the resources required to conduct S&M surveys, which are time and cost-intensive. Spies et al., *supra* note 127, at 2-3.

¹⁴⁶ The agencies first attempted to eliminate the S&M provision all together, which drew lawsuits from conservationists and the timber industry. *Douglas Timber Operators v. Secretary of Agriculture*, No. 01-6378-AA (D. Or. 2001); *Oregon Natural Resources Council Action v. Veneman*, No. 02-983-AA (D. Or. 2001). The Bush administration settled the litigation by agreeing to prepare a revised supplemental EIS on removing or modifying the S&M provisions. See COGGINS, et al., *supra* note 126, at 727; U.S. Forest Service, Regional Ecosystem Office (REO), *Northwest Forest Plan, Survey and Manage*, <https://www.fs.fed.us/r6/reo/survey-and-manage/> (last visited Jan. 31, 2021) (providing a brief history of S&M amendments and links to associated planning documents); see also *infra* Sections V, VI (describing legal challenges to the NFP and to BLM's withdrawal from the plan).

¹⁴⁷ See S&M AMENDMENTS ROD, *supra* note 141, at 6 ("These changes include the removal of 72 species from these standards and guidelines in all or part of their range, based on new information regarding their abundance, habitat association, or presence in the planning area"). The annual species review process amendment applied information from strategic surveys and confirmed the agencies' ability to add or remove species from the S&M list. *Id.* at 7-8. Even before the S&M amendments, the agencies removed species from S&M. See NFP STANDARDS & GUIDELINES, *supra* note 118, at C-6 (" . . . agencies may propose changes to the Regional Ecosystem Office for analysis. These changes could include moving a species from one survey strategy to another, or dropping this mitigation requirement for any species whose status is determined to be more secure than originally projected").

¹⁴⁸ See *infra* notes 201-06 and accompanying text.

The NFP incorporated adaptive management in order to provide flexibility and encourage land managers to develop new management approaches.¹⁴⁹ The plan calls for agencies to monitor their actions, provide feedback to land managers and the public, and use the information acquired to inform whether individual management plans should be revised to meet the NFP's objectives.¹⁵⁰ As part of its adaptive management strategy, the NFP established ten adaptive management areas: land allocations designed to encourage land managers to experiment with non-traditional approaches to achieve the plan's ecological, economic, and social objectives.¹⁵¹ FEMAT envisioned that managers would test nontraditional forest management strategies by implementing innovative forest management practices, such as pursuing different silviculture treatments and rotation ages to increase late-successional forest characteristics important to wildlife, experimenting with habitat restoration techniques, and assessing the environmental and economic sustainability of various harvest levels and methods.¹⁵²

¹⁴⁹ NFP STANDARDS & GUIDELINES, *supra* note 118, at C-21, E-12 (“Adaptive management is a continuing process of action-based planning, monitoring, researching, evaluating and adjusting with the objective of improving the implementation and achieving the goals of these standards and guidelines”).

¹⁵⁰ Rule, *supra* note 104, at 227; *see also* NFP STANDARDS & GUIDELINES, *supra* note 118, at E-15 (explaining that if agencies decide that plan adjustments are needed, revisions will often be “within the realm of administrative change,” but others may need to satisfy NEPA requirements, and some may require statutory changes).

¹⁵¹ *See* NFP STANDARDS & GUIDELINES, *supra* note 118, at C-21 (“Adaptive Management Areas were selected to provide opportunities for innovation, provide examples in major physiographic provinces, and provide a range of technical challenges, from an emphasis on restoration of late-successional forest conditions and riparian zones to integration of commercial timber harvest with ecological objectives”); NFP RECORD OF DECISION, *supra* note 115, at 28; The FEMAT also designed adaptive management areas as an avenue for testing wildfire and fuels management strategies and established most adaptive management areas in parts of the region affected by reduced timber harvest on federal lands. This allocation aimed to encourage managers to engage with those forest communities in the hope that the adaptive management areas would be managed collaboratively through extensive public participation to increase community resiliency in the face of reduced harvests. NFP STANDARDS & GUIDELINES, *supra* note 118, at C-21, D-10.

¹⁵² *See also* NFP SEIS, *supra* note 141, at B-51 (“It is hoped that localized, idiosyncratic approaches that may achieve the conservation objectives of the selected alternative can be pursued. These approaches rely on the experience and ingenuity of resource managers and communities rather than traditionally derived and tightly prescriptive approaches that are generally applied in management of forests”); *see also* NFP RECORD OF DECISION, *supra* note 115, at 28 (describing some of the approaches land managers could take under adaptive management areas guidelines).

The agencies ultimately discontinued active adaptive management: although the FEMAT report considered the program the cornerstone of the plan's strategy, it acknowledged that much of its success relied on forest managers pursuing voluntary measures that the agencies lacked the resources – or even the motivation – to undertake.¹⁵³ In 2006, the Forest Service released a ten-year review of the NFP, identifying four main factors contributing to the agencies' decision to discontinue the program, particularly in adaptive management areas: (1) forest manager autonomy was limited, making experimentation difficult; (2) some forest managers saw adaptive management as a public participation process only to test the plan's collaborative goals, rather than as an important strategy for meeting the NFP's overarching objectives;¹⁵⁴ (3) managers were risk-averse, leading to excessive caution in testing nontraditional methods; and (4) sufficient resources were not available to implement adaptive management as the NFP envisioned.¹⁵⁵

¹⁵³See NFP SEIS, *supra* note 141, at 28 (“These adaptive management areas offer the opportunity for creative, voluntary participation in forest management activities by willing participants. *We recognize that this will take time, effort, and a good-faith commitment to the goal of improved forest management. Many of the potentially participating communities and agencies have different capabilities for joining this effort. Our approach to implementing this initiative will recognize and reflect these differences as we seek to encourage and support the broadest possible participation*”) (emphasis added).

¹⁵⁴ See *infra* note 155 (explaining in part why the public participation process was not effective in fostering collaboration with communities).

¹⁵⁵ The review suggested that “regulatory agencies could have been more thoughtfully engaged in the learning efforts.” U.S. DEP’T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-651, *Northwest Forest Plan—The First 10 Years (1994-2003): Synthesis of Monitoring and Research Results* xii-xiii (Oct. 2006); see also *id.* at xiii (explaining that the program had some successes both in adaptive management areas and outside of them, and asserting that “most evolved from successful researcher-manager partnerships, and some involved areas with a history of collaboration”); see also George H. Stankey et al., *Adaptive Management and the Northwest Forest Plan: Rhetoric and Reality*, 101 J. OF FORESTRY 1, 43-44 (2003) (detailing the confusion surrounding how managers should manage adaptive management areas and citing lack of funding for the program). In part because of a lack of trust between the Forest Service and environmental groups, when the agency did attempt to engage with communities for meaningful collaboration, success was limited. Community members often cited frustrations that both timber interests and environmental groups dominated the public process and had disproportionate influence over decision makers, and some individuals also expressed concerns that the Forest Service was not sincerely interested in public involvement, lamenting that the agency made little effort to translate complex technical language or to build relationships with the community. U.S. DEP’T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-RP-567, *Learning to Manage a Complex Ecosystem: Adaptive Management and the Northwest Forest Plan* 113-117 (Aug. 2006).

Although a basic purpose of adaptive management is to foster the knowledge needed to manage a complex ecosystem, a lack of ecological and socioeconomic baseline knowledge led to technical restraints that significantly stymied the NFP implementation process.¹⁵⁶ By 2006, the agencies were managing a majority of adaptive management areas like they managed matrix land,¹⁵⁷ the plan's land allocation that prioritizes timber harvest.¹⁵⁸ Still, the agencies continued to implement other formal and informal forms of adaptive management, such as through the S&M annual species review process and the plan's overarching monitoring requirements.¹⁵⁹

The NFP's monitoring program is perhaps the largest of its kind in the world,¹⁶⁰ and FEMAT considered the program essential to the plan's success.¹⁶¹ Agencies conduct monitoring at multiple levels and scales, from site-specific monitoring related to particular projects to region-wide monitoring, and the resulting information helps to indicate whether managers are implementing the NFP's standards and guidelines.¹⁶² Monitoring is part of every NFP provision,

¹⁵⁶ See U.S. DEP'T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-RP-567, *Learning to Manage a Complex Ecosystem: Adaptive Management and the Northwest Forest Plan* 33-34 (Aug. 2006) ("These information deficiencies become more debilitating when we act at large, multi-tenure spatial scales and over long temporal scales").

¹⁵⁷ When the Forest Service ceased attempting to manage adaptive management areas as envisioned by the plan, or whether it ever officially did so, is unclear. But in a 2006 report, Forest Service researchers declared that adaptive management was "at best treading water, at worst sunk," and that if adaptive management areas were reinvigorated, the agency had to make a "clear, unequivocal commitment" to do so with an aggressive implementation effort. That commitment never came. See U.S. DEP'T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-RP-567, *Learning to Manage a Complex Ecosystem: Adaptive Management and the Northwest Forest Plan* 177-78 (Aug. 2006).

¹⁵⁸ Jack Ward Thomas et al., *The Northwest Forest Plan: Origins, Components, Implementation Experience, and Suggestions for Change* 20 CONSERV. BIO., 277, 283 (2006).

¹⁵⁹ U.S. DEP'T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-651, *Northwest Forest Plan—The First 10 Years (1994-2003): Synthesis of Monitoring and Research Results* 221-22 (Oct. 2006).

¹⁶⁰ Spies et al., *supra* note 127, at 7.

¹⁶¹ NFP STANDARDS & GUIDELINES, *supra* note 118, at E-1.

¹⁶² See *id.* ("Monitoring at any scale should: Detect changes in ecological systems from both individual and cumulative management actions and natural events, provide a basis for natural resource policy decisions; Provide standardized data, compile information systematically, link overall information management strategies for consistent implementation, ensure prompt analysis and application of data in the adaptive management process, [and] distribute results in a timely manner"). The agencies also used adaptive management to determine whether the underlying assumptions used in developing the NFP were sound. *Id.*

and is particularly important to track ecological conditions and the plan's adaptive management scheme.¹⁶³ FEMAT warned that, if not carefully planned, monitoring could become cost-prohibitive,¹⁶⁴ and perhaps not always successful.¹⁶⁵

E. Socioeconomic Considerations

The NFP sought to study and reduce its economic effect on rural, timber-dependent communities in the planning area¹⁶⁶ by establishing the Northwest Economic Adjustment Initiative (NEAI) and a socioeconomic monitoring program as part of the economic measures outlined in the plan.¹⁶⁷ Congress authorized implementation of the NEAI and called for funding the program with \$1.2 billion over the course of five years beginning in 1994¹⁶⁸ to support the local economies that the NFP planners anticipated would decline as a result of reduced timber harvests.¹⁶⁹ Those

¹⁶³ See *id.* at E-3 (“the success of adaptive management depends on the accuracy and credibility of information obtained through inventories and monitoring”); *Id.* at E-8.

¹⁶⁴ The plan sought to avoid excessive costs by focusing on key monitoring questions and proper sampling methods. *Id.* at E-2.

¹⁶⁵ See Spies et al., *supra* note 127, at 7 (“a biodiversity monitoring program initially called for in the [NFP] was not created ... and socioeconomic monitoring was reduced to a minimum owing to limited funding and competing priorities”).

¹⁶⁶ See Keith Routman, *Forest Communities and the Northwest Forest Plan: What Socioeconomic Monitoring Can Tell Us*, PAC. N.W. RES. STATION SCIENCE FINDINGS, U.S. FOREST SERV. 1 (Aug. 2007).

¹⁶⁷ *Id.* See generally U.S. FOREST SERVICE, NORTHWEST FOREST PLAN: OUTCOMES AND LESSONS LEARNED FROM THE NORTHWEST ECONOMIC ADJUSTMENT INITIATIVE (Nov. 1999) (describing the goals and methods of the NEAI and providing perspectives and socioeconomic data from each affected state); see *infra* note 169 (noting other economic measures outlined in the NFP).

¹⁶⁸ The Clinton administration announced the plan eight months into fiscal year 1993 and sought appropriations for that year be modified in light of the plan's funding needs. The administration proposed that \$280 million be added, and Congress approved a lesser amount of \$256 million through various modifications of existing appropriations bills. Fiscal year 1995 saw \$268 million go to the NEAI, and Congress approved \$210 million of the \$267 million proposed for 1997. See U.S. DEP'T OF AGRIC., OFFICE OF FORESTRY AND ECONOMIC ASSISTANCE, THE NORTHWEST FOREST PLAN: A REPORT TO THE PRESIDENT AND CONGRESS 249 (Dec. 1996) [hereinafter NFP: A REPORT TO THE PRESIDENT AND CONGRESS]; see also Federal-State Memorandum of Understanding for Economic Adjustment and Community Assistance (1993), <https://www.fs.fed.us/r6/reo/library/downloads/agreements/econmou.htm>.

¹⁶⁹ Financial support was intended to provide small business loans, grants to develop local infrastructure, programs to retrain timber workers, and new jobs relating to ecosystem management and restoration on federal lands. Routman, *supra* note 166, at 4; see also Jonathan Kusel et al., *Institutional Analysis in the Evaluation of the Northwest Economic Adjustment Initiative* 10 INT. J. OF ORG. THEORY & BEHAVIOR 476, 478 (2007) (“Other parts of the NFP's economic relief package focused on payments to counties to compensate for the loss of revenue traditionally tied to federal timber receipts; removal of incentives for

funds were distributed to forest communities by a variety of federal agencies, including the Forest Service and BLM, the Department of Labor, and the Economic Development Administration.¹⁷⁰

For the most part, the NEAI failed to deliver on its promises because some states and localities failed to distribute the funds equitably, some communities lacked the infrastructure to apply for financial support, and few sustainable local jobs resulted due to a disconnect between the available workforce and the scope of work now required of forest workers.¹⁷¹ Compounding the problem were persistent congressional cuts to the Forest Service's budget: the agency had to close or consolidate 23 percent of NFP-area offices between 1990 and the early 2000s because it lacked the resources to expand recreation opportunities in the region's national forests while keeping Forest Service workers employed, as Congress also required.¹⁷² The Bush administration effectively terminated the program early in its tenure for opaque reasons.¹⁷³

the export of raw logs; and assistance to encourage growth and investment of small businesses and secondary manufacturers in the woods-products industry"). The NFP proposed \$13 million in additional funding for economic adjustment, but Congress never appropriated the money. *Id.*

¹⁷⁰See NFP: A REPORT TO THE PRESIDENT AND CONGRESS, *supra* note 168, at 158-173 (providing a detailed account of how the NEAI was funded from 1994-1996 and describing the participating agencies and departments, their approaches, and where their funds came from); see also U.S. DEP'T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-465, *Timber Harvesting, Processing, and Employment in the Northwest Economic Adjustment Initiative Region: Changes and Economic Assistance* 11-13 (Oct. 1999) (providing tables of total NEAI expenditures by state, Small Business Administration, category of assistance, and fiscal year).

¹⁷¹ See Routman, *supra* note 166, at 4.

¹⁷² See *id.* ("Declines in federal timber production led directly to cuts in agency operating budgets and jobs. From the early 1990s to the early 2000s, Plan-area national forests saw an average budget decline of 35 percent, and an average drop in staff jobs of 36 percent"). BLM did not close any field offices; the agency's budget is less reliant on federal timber sales, and it appeared to have provided expanded recreation opportunities in its plan-area forests, whereas Forest Service did not. *Id.* at 4; Susan Charnley, *The Northwest Forest Plan as a Model for Broad-Scale Ecosystem Management: a Social Perspective*, 20 CONSERV. BIOL. 330, 333 (2005).

¹⁷³ The NEAI had no identifiable, official termination date or publicly-expressed rationale, but certain events assist in identifying the initiative's end. For instance, the Coordination Office in Portland that acted as the link between the White House and the program closed with the end of the Clinton administration, and under the new Bush administration, meetings of the Community Economic Revitalization Team ceased. The Bush administration also ended the dynamic role of the office of State and Private Forestry in the Forest Service, despite its leaders' effective role in assisting impoverished communities. These closures were not preceded by an announcement from the administration. Email Exchange with Jonathan Kusel, Executive Director, Sierra Institute (Jul. 21, 2021) (on file with authors). It is also unclear when exactly NEAI funding

The NFP's social monitoring program did reveal that about a third of NFP communities experienced a decrease in socioeconomic well-being between 1990 and 2000, while another third experienced an increase.¹⁷⁴ During that decade, employment in the primary wood-products industries declined by about 30,000 jobs in the plan area, but most of those job losses were not due to the NFP's harvest restrictions: instead, they were due to external factors such as international market forces and technological improvements in milling infrastructure.¹⁷⁵ Moreover, about a third of those job losses took place before the plan became effective but after the ESA listing of the spotted owl and the ensuing court injunctions.¹⁷⁶ Of the roughly 11,000 jobs lost after the NFP took effect, just 400 losses were the result of reduced federal harvests, as the vast majority were due to mill closures before timber supply declines, largely due to increased mill efficiency and continued investment in mechanization.¹⁷⁷

ended because drawing a distinct line between what was and was not funding for the program seems impossible. For example, Congress appropriated to the Department of Commerce a substantial amount of money for economic development, so Commerce continued to fund aspects of NEAI even after its termination. *Id.* Additionally, Congress took measures beginning in 1991 to mitigate lost revenues to timber communities by using new formulas to calculate payments to states and counties to make them less reliant on timber sale receipts. The most recent of these in-lieu programs is the Secure Rural Schools and Community Self-Determination Act of 2000, which has been reauthorized several times and is still in effect today. *See* SYNTHESIS OF SCIENCE, *supra* note 11, at 629; *see also* Press Release, Ron Wyden, United States Senator for Oregon, Oregon Delegation: 31 Counties in State Receive More Than \$39 Million in Secure Rural School Funding (April 5, 2021), <https://www.wyden.senate.gov/news/press-releases/oregon-delegation-31-counties-in-state-receive-more-than-39-million-in-secure-rural-school-funding> (“31 Oregon counties will receive about \$39.3 million in Secure Rural Schools (SRS) payments for schools, roads, law enforcement and other essential services. These payments to Oregon counties are the last ones under the SRS program’s current authorization”). *Id.* Moreover, beginning in the 2000s, Congress provided appropriations language authorizing the Forest Service and BLM to take the needs of communities into consideration when awarding contracts for restoration work. *Id.*

¹⁷⁴ Routman, *supra* note 166, at 1.

¹⁷⁵ *See* Charnley, *supra* note 172, at 334; SYNTHESIS OF SCIENCE, *supra* note 11, at 636 (“Even when timber supply changes are happening, mill employment remains influenced by technological improvements to mill operations. For instance ... 38 percent of the decline in employment at sawmills between 1988 and 1994 (when federal timber harvests declined precipitously) can be attributed to technological change that reduced labor requirements.”).

¹⁷⁶ *See* Charnley, *supra* note 172, at 332.

¹⁷⁷ Charnley, *supra* note 172, at 334. Despite job losses in the timber industry, the effect on the regional economy was insignificant because the region as a whole gained 1.3 million jobs across all industries, a majority of which were in the trade and services sectors. *Id.*

The NFP contemplated a “jobs-in-the-woods” program and, while the program never effectively employed displaced millworkers,¹⁷⁸ many communities adopted other ways to respond to the loss of mill jobs. Some successfully responded to reduced harvest levels by focusing on agriculture, tourism, and recreation infrastructure to attract amenity seekers.¹⁷⁹ Although the NEAI did not help many of the small communities hit hardest by reduced timber harvest on federal lands, the socioeconomic well-being of most communities turned out to be not as timber-dependent as plan expected, especially in terms of declining federal harvests.¹⁸⁰ This result was due in part because of communities’ ability to adapt to changed conditions, and in part because numerous external factors other than federal timber harvest levels affect the economic stability of forest communities, including national economic conditions, regional economic diversification, influxes of retirees, and a significant growth of tribal businesses and services.¹⁸¹

¹⁷⁸ The NFP created the jobs-in-the-woods program – separate from the NEAI – to retrain and employ displaced lumber workers for restoration, research, and forest stewardship work. At least one Plan area national park was able to pinpoint some reasons for the program’s ineffectiveness: “Redwood National Park scientists quickly found ... that hiring dozens of former mill workers and saw hands to do manual labor restoring roads and streams was problematic and inefficient. Because Congress had granted generous unemployment benefits to a broad class of displaced workers, with no requirement for seeking or accepting work, it proved difficult to recruit enough labor for the work crews, and more skilled jobs within the park failed to materialize. It is not clear how well the Jobs-in-the-Woods Program worked, because the state [Department of Labor] did not track displaced timber workers long term to see if retraining, relocation money, and hiring on at the National Park Service had worked.” CHRISTOPHER DEFOREST, U.S. DEP’T OF AGRIC., FOREST SERV., & PAC. N.W. RES. STATION, PNW-GTR-449, WATERSHED RESTORATION, JOBS-IN-THE-WOODS, AND COMMUNITY ASSISTANCE: REDWOOD NATIONAL PARK AND THE NORTHWEST FOREST PLAN 12 (May 1999). Additionally, heavy equipment proved to be more efficient for restoration work than manual labor. *Id.* Another issue with the Jobs-in-the-Woods program was a lack of clear guidelines and objectives. *Id.* at 18, 19; *see also* Charnley, *supra* note 172, at 334 (“The dwindling contract money that was available [from local jobs tied to ecosystem management] was not targeted to local communities that had experienced the greatest impacts from the plan”).

¹⁷⁹ Routman, *supra* note 166, at 2.

¹⁸⁰ SYNTHESIS OF SCIENCE, *supra* note 11, at 628-29.

¹⁸¹ *Id.*; Routman, *supra* note 166, at 4 (“‘Stability’ was the focus of past forest policies. But social scientists now take a broader view of what stability means . . . Communities adapt to change in the face of unknowns to meet the needs of their residents in lots of different ways”); *see also* Charnley, *supra* note 172, at 335-36 (“Many factors influence well-being in communities around federal forests ... Predictable timber supplies may contribute to economic stability, but they do not ensure it. Thus, even if the agencies had succeeded in producing a steady timber supply consistent with [probable sale quantity] estimates, it is

V. Court Interpretations of the Northwest Forest Plan

The ink on the Northwest Forest Plan and Judge Dwyer's decision to uphold it was barely dry before Congress made another attempt to increase federal timber harvests in the Pacific Northwest. In response to the domestic terrorism bombing of a federal building in Oklahoma City and the 1994 California wildfires, in July 1995 Congress enacted a supplemental appropriations act.¹⁸² Section 2001 of that must-pass legislation, advanced by the timber industry, echoed the 1989 section 318 salvage rider in content and scope, purporting to exempt timber sales across the country – but particularly in the Pacific Northwest – from the operation of environmental and other laws, including the recently-approved Northwest Forest Plan.¹⁸³ Although the Act lasted only through the end of Fiscal Year 1995, its long-term effect was to facilitate the logging of billions of board feet of ancient forest unaffected by wildfire without the benefit of environmental analysis, public involvement, or Endangered Species Act compliance.¹⁸⁴ Although challenged in court by a number of parties, the 1995 rider largely survived judicial review.¹⁸⁵ The 1995 salvage rider would

unlikely [the agencies] would have met their second goal, to maintain the stability of local and regional economies”).

¹⁸² Emergency Supplemental Appropriations for Additional Disaster Assistance, for Anti-terrorism Initiatives, for Assistance in the Recovery from the Tragedy that Occurred at Oklahoma City, and Rescissions Act (Fiscal Year 1995 Rescissions Act), Pub. L. No. 104-19, § 2001, 109 Stat. 194, 240-47 (1995) (codified at 16 U.S.C. § 1611).

¹⁸³ 16 U.S.C. § 1611 (d) (“Direction to Complete Timber Sales on Lands Covered by Option 9”).

¹⁸⁴ United States Forest Service, *Forest Products Cut and Sold from the National Forests and Grasslands* (July 5, 2021), https://www.fs.fed.us/forestmanagement/documents/sold-harvest/documents/1905-2020_Natl_Summary_Graph.pdf (national forest system harvest); Anne A. Riddle, Congressional Research Service, *Timber Harvesting on Federal Lands, Figure 4* (July 5, 2021), https://www.everycrsreport.com/files/20200410_R45688_c39fac8404eb064d67fad47dc65c21a7d7c3ba2b.pdf (BLM harvest).

¹⁸⁵ See *Inland Empire Pub. Lands Council v. Glickman*, 88 F.3d 697 (9th Cir. 1996) (applying the arbitrary and capricious standard of judicial review to actions implementing the 1995 salvage rider, and deciding that the Forest Service did not act arbitrarily when it declined to consider the effects of a timber sale on grizzly bears); *Idaho Conservation League v. Thomas*, 917 F. Supp. 1458, 1465-67 (D. Idaho 1995), *aff'd*, 91 F.3d 1345 (9th Cir. 1996) (upholding Forest Service analysis of a timber sale's effects on listed fish under that standard of review); *Southwest Ctr. for Biological Diversity v. United States Forest Serv.*, 100 F.3d 1443 (9th Cir. 1996) (upholding the Forest Service's ability to “ignore the views of other agencies” concerning the effects of timber sales on Mexican spotted owls); *Oregon Natural Resources Council v. Thomas*, 92

undermine conservationists' faith in the Clinton Administration, and Vice President Al Gore called it "the biggest mistake" of the administration.¹⁸⁶

A. Implementing the Survey and Manage Program

The NFP's S&M program required surveys for hundreds of at-risk or rare species and establishment of no-harvest buffers around "known sites" of those species before all ground-disturbing activities.¹⁸⁷ As the extent of the program became known to the agencies – surveys often required several years to complete at substantial cost, and the buffers amounted to unharvestable acres – the agencies sought creative ways to avoid triggering the program. For example, in 1997, the Forest Service and BLM issued a memorandum interpreting the application of the S&M program as applying only to timber sale decisions issued after September 1996, exempting at least forty proposed sales from the survey requirements.¹⁸⁸ Conservation groups challenged this interpretation as inconsistent with the NFP, and Judge Dwyer agreed.¹⁸⁹ He issued an NFP-wide injunction until the agencies complied with the S&M requirements.¹⁹⁰

Undaunted, the incoming Bush Administration issued a supplemental EIS in 2001 justifying changes to the S&M requirement.¹⁹¹ Challenges by both conservationists and the timber industry resulted in another settlement agreement requiring the Forest Service and BLM to prepare

F.3d 792 (9th Cir. 1996) (ruling that the rider's language of "notwithstanding any other provision of law" precluded judicial review of all NFP timber sales because it left "no law to apply"); *Idaho Sporting Congress v. United States Forest Serv.*, 92 F.3d 922 (9th Cir. 1996) (rejecting challenges to salvage timber sales on several grounds, including a lack any "law to apply"); *but see, Klamath Tribes v. U.S.*, No. 96-381-HA (D. Or. Mar. 22, 1996) (holding that section 2001 did not abrogate Native American treaty rights).

¹⁸⁶ Scott Sonner, *Gore Calls Salvage Logging 'Biggest Mistake' Admission Comes In TV Interview Scheduled To Air Tonight*, THE SPOKESMAN-REVIEW, Sept. 27, 1996, available at <https://www.spokesman.com/stories/1996/sep/27/gore-calls-salvage-logging-biggest-mistake/>.

¹⁸⁷ NFP STANDARDS & GUIDELINES, *supra* note 118, at C-4 – C-6.

¹⁸⁸ *Oregon Nat. Res. Council Action v. U.S. Forest Serv.*, 59 F. Supp. 2d 1085, 1092 (W.D. Wash. 1999) (*Survey and Manage I*).

¹⁸⁹ *Id.* at 1093.

¹⁹⁰ *Id.* at 1096.

¹⁹¹ United States Bureau of Land Management, *Survey and Manage History and Update* (July 1, 2021), <https://www.blm.gov/or/plans/surveyandmanage/history.php>.

a second supplemental EIS on the proposed changes to the program.¹⁹² That EIS, released in 2004, chose not to expressly eliminate the program but instead created a new “special status” species program that required no surveys or established no-harvest buffers.¹⁹³ Litigation ensued, and Judge Marsha Pechman ruled that the EIS was deficient for failing to sufficiently analyze the effect of transferring species to the new “sensitive species” list and the lack of protections for them.¹⁹⁴ The court emphasized the government’s failure to explain why it thought the S&M requirement was necessary in 1994 but was not ten years later.¹⁹⁵ Although the agencies could amend the NFP, they had to rationally explain their reasons for doing so, a recurring problem with the Bush administration’s persistent efforts to eviscerate the plan.

Although Judge Pechman ruled in favor of the conservationists, she did not issue an NFP-wide injunction, as Judge Dwyer had in the past.¹⁹⁶ Instead, she ordered the parties, including the intervening timber industry, to enter into settlement discussions concerning the proper scope of the remedy. The resulting settlement retained the original S&M program but created several exemptions from the survey and buffer requirements, the most significant of which was an

¹⁹² *Douglas Timber Operators v. Secretary of Agriculture*, No. 01-6378-AA (D. Or. 2001); *Oregon Natural Resources Council Action v. Veneman*, No. 02-983-AA (D. Or. 2001).

¹⁹³ United States Bureau of Land Management, *Survey and Manage History and Update* (July 1, 2021), <https://www.blm.gov/or/plans/surveyandmanage/history.php>.

¹⁹⁴ *Nw. Ecosystem All. v. Rey*, 380 F. Supp. 2d 1175, 1190 (W.D. Wash. 2005) (*Survey and Manage II*).

¹⁹⁵ *Id.* at 1192-93: “...the point under NEPA is that the Agencies’ analysis of the environmental impacts of eliminating the standard is premised on an assumption that is inconsistent with their own prior analysis and therefore appears to lack support. Even if including the Survey and Manage standard as a part of the Plan was a policy choice by the Agencies in 1994, just as eliminating the standard is the Agencies’ policy choice in 2004, the Agencies have an obligation under NEPA to disclose and explain on what basis they deemed the standard necessary before but assume it is not now.” See also *Organized Vill. of Kake v. U.S. Dep’t of Agric.*, 795 F.3d 956, 966–67 (9th Cir. 2015) (“a policy change complies with the APA if the agency (1) displays ‘awareness that it is changing position,’ (2) shows that ‘the new policy is permissible under the statute,’ (3) ‘believes’ the new policy is better, and (4) provides ‘good reasons’ for the new policy, which, if the ‘new policy rests upon factual findings that contradict those which underlay its prior policy,’ must include ‘a reasoned explanation ... for disregarding facts and circumstances that underlay or were engendered by the prior policy’) (citing *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515-16 (2009)).

¹⁹⁶ See Timothy Egan, *William Dwyer Dies at 72; A Judge of Vast Influence*, N.Y. Times (Feb. 15, 2002), <https://www.nytimes.com/2002/02/15/us/william-dwyer-dies-at-72-a-judge-of-vast-influence.html>.

exemption from the requirements for projects that thinned existing forest plantations (*i.e.*, recent clearcuts) and/or undertook hazardous fuels reduction in forest stands less than 80 years old. These provisions, the so-called “Pechman exemptions,” allowed thousands of acres of logging of federal forests without adhering to the letter of the S&M requirements.¹⁹⁷

In 2007, the Bush administration took another shot at ending the S&M program, proposing to terminate it on grounds of its high cost, interference with management flexibility, and alleged ineffectiveness.¹⁹⁸ This effort, too, was challenged by conservationists, and the reviewing court again found a NEPA violation for failing to adequately justify its decision to eliminate the program.¹⁹⁹ Yet another settlement between conservationists and the government recognized additional exemptions from the S&M program outside of spotted owl old-growth habitat, making additional timber available for harvest. Nevertheless, the timber industry appealed that settlement agreement on the ground that it changed the NFP without adequate NEPA documentation or public involvement as required by NFMA and FLPMA. Agreeing with industry that the settlement did not comply with NFMA, FLPMA, and NEPA, the Ninth Circuit vacated the district court’s approval of the settlement, ironically eschewing the additional timber volume that the agreement would have made available for harvest.²⁰⁰

B. Implementing the Aquatic Conservation Strategy

Attempts to evade the aquatic protections of the ACS were no more successful than the agencies’ attempts to avoid the S&M requirements for terrestrial species. In 1998, fishing and conservation interests challenged a programmatic biological opinion issued by the National Marine

¹⁹⁷ *Id.*

¹⁹⁸ United States Bureau of Land Management, *Survey and Manage History and Update* (July 1, 2021), <https://www.blm.gov/or/plans/surveyandmanage/history.php>.

¹⁹⁹ *Conservation Nw. v. Rey*, 674 F. Supp. 2d 1232, 1247-53 (W.D. Wash. 2009) (*Survey and Manage III*).

²⁰⁰ *Conservation Nw. v. Sherman*, 715 F.3d 1181 (9th Cir. 2013).

Fisheries Service (NMFS) on timber harvests under the NFP in the Umpqua River Basin, arguing that NMFS improperly assumed that compliance with the NFP's ACS was sufficient to demonstrate compliance with the ESA.²⁰¹ However, the district court upheld the biological opinion on the ground that NMFS reasonably assumed that the land management agencies would faithfully implement all aspects of the ACS at all temporal and spatial scales.²⁰²

This decision which was not appealed by conservationists, turned out to be consequential because NMFS—having equated its ESA duty to ensure against “no jeopardy” to listed species with the action agency’s ACS compliance—would now be required to look into whether the Forest Service or BLM in fact complied with the ACS on site-specific timber sales, including whether those agencies analyzed both short- and long-term effects and site-specific waterway and watershed-level effects of timber harvest. In a subsequent challenge to NMFS timber sale biological opinions, the district court enjoined planned timber harvests because the Forest Service failed to demonstrate that the timber sales complied with the ACS, making NMFS’ reliance on land managers’ assurances of compliance arbitrary and capricious.²⁰³

The Bush administration’s next effort to increase logging was another attempt to amend the NFP, this time by “clarifying” the ACS. As part of the government’s 2003 settlement

²⁰¹ *Pac. Coast Fed’n of Fishermen’s Associations v. Nat’l Marine Fisheries Serv.*, No. 97-CV-775, 1998 WL 1988556, at *5–6 (W.D. Wash. May 29, 1998) (*PCFFA I*).

²⁰² *Id.* at *10.

²⁰³ *Pac. Coast Fed’n of Fishermen’s Ass’n v. Nat’l Marine Fisheries Serv.*, 71 F. Supp. 2d 1063 (W.D. Wash. 1999), *aff’d in part, vacated in part sub nom. Pac. Coast Fed’n of Fishermen’s Associations, Inc. v. Nat’l Marine Fisheries Serv.*, 253 F.3d 1137 (9th Cir. 2001), *opinion amended and superseded on denial of reh’g sub nom. Pac. Coast Fed’n of Fishermen’s Ass’n, Inc. v. Nat’l Marine Fisheries Serv.*, 265 F.3d 1028 (9th Cir. 2001) (*PCFFA II*). NMFS’s argument, which would be the premise of the Bush administration’s next effort to amend the ACS, was that the action agencies should be allowed to conduct timber harvest that may have site-specific adverse effects at the time of project implementation, but in the long term and at the watershed scale, was not likely to jeopardize listed species. In short, dilution would be the solution to aquatic pollution. However, because the listed species were in critical condition in the short term in individual stream reaches, the court decided that such an approach was unreasonable. *Id.* at 1146.

agreement with the timber industry,²⁰⁴ the Forest Service and BLM proposed to amend the ACS in 2003, so that it would apply only at the watershed scale and in the distant future, while exempting individual projects from the ACS provisions. This proposal engendered another suit and another court injunction because the proposal again failed to explain, in either its accompanying NEPA or ESA analysis, why the agencies were departing from an essential element of the NFP.²⁰⁵ The court also faulted the agencies' failure to disclose and discuss dissenting scientific views and remanded the issue to the Forest Service and BLM.²⁰⁶ But the agencies took no further action.

C. Managing for Owls After Wildfire

A basic premise of the NFP was that timber harvests were not the only threats to the persistence of the northern spotted owl: natural disturbances, particularly wildfire, also represented a cognizable threat. In the case of wildfire, although not much was then known about spotted owls' use of burned forests, scientists recognized that post-fire logging – also called “salvage logging” – often removed substantial quantities of older forests important to not only the owl, but other late-successional-associated species. Land managers often want to harvest burned trees as quickly as possible, since insects invade burned areas immediately after the flames are extinguished and begin to consume the burned wood. Although the structural integrity of the wood is not usually affected so much as to prohibit commercial logging, especially of larger trees, insect activity does cause

²⁰⁴ See *infra* note 219 and accompanying text.

²⁰⁵ *Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Servs.*, 482 F. Supp. 2d 1248, 1252-53, 1270 (W.D. Wash. 2007) (*PCFFA III*) (“ . . . where an agency has previously made a policy choice to conform to a particular standard, and now seeks to amend that standard, ‘the Agencies have an obligation under NEPA to disclose and explain on what basis they deemed the standard necessary before but assume it is not now.’ *Northwest Ecosystem Alliance v. Rey*, 380 F.Supp.2d 1175, 1192 (W.D. Wash. 2005). Under this reasoning, “the 2003 [EIS's] assessment of the impact of the ACS amendment is inadequate and fails to conform to NEPA standards”).

²⁰⁶ *Id.*

the wood to take on a blue hue undesirable in some building trades (but also coveted by others).²⁰⁷ Therefore, after a wildfire, managers often seek to expedite the logging of burned forests.

The drafters of the NFP consequently included rather detailed directives regarding management of forests affected by wildfire, particularly forests located in LSRs. According to Dr. Jerry Franklin, one of the drafters of the NFP, the plan envisioned LSRs “as a robust system of ecological reserves, which could accommodate large intense natural disturbances and the [ensuing] natural recovery processes;” consequently, the plan recommended only “very limited” salvage logging in LSRs because it would interfere with natural recovery processes.²⁰⁸ The NFP requires land management agencies to manage LSRs to “protect and enhance conditions of late-successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth related species.”²⁰⁹ Although the plan permits post-fire logging in LSRs, it restricts the timing, location, type, and amount of salvage logging in a number of ways.²¹⁰

²⁰⁷ See, e.g. General Building Materials Wholesale Lumber Products, *Blue Stain* (Aug. 3, 2021) <https://gbmlumber.com/products/blue-stain/> (explaining the structural integrity, coloring, and specialty market value of blue-stained wood).

²⁰⁸ According to Dr. Franklin, “...The team that designed the LSR system knew that large stand replacing disturbances would impact LSRs and, therefore, that the LSR network needed to be able to accommodate such disturbances...Hence, the team built sufficient redundancy into the LSR system so that it could accommodate large disturbances and still remain viable as a regional network. This redundancy would also allow for natural recovery processes within impacted LSRs. Building reserve systems that will accommodate natural disturbance regimes is, of course, a first principle in conservation biology...One could say that the LSR system was overbuilt in terms of immediate habitat needs. A major reason for doing this was the FEMAT planners’ belief that natural recovery processes could and should be accommodated following major disturbances to LSRs.” Letter from Dr. Jerry Franklin to Patricia A. Grantham, Forest Supervisor, Klamath National Forest, *Comments on the Draft Environmental Impact Statement for the Westside Fire Recovery Project*, 3 (April 6, 2015) (on file with authors).

²⁰⁹ NFP STANDARDS & GUIDELINES, *supra* note 118, at C-11.

²¹⁰ First, the NFP requires salvage logging within LSRs to be consistent with LSR objectives, including the “development of old-growth forest characteristics including snags” (standing dead trees that often serve as wildlife habitat). NFP STANDARDS & GUIDELINES, *supra* note 118, at B-5. Second, the NFP states that within LSRs, “while priority should be given to salvage in areas where it will have a positive effect on late-successional forest habitat, salvage operations should not diminish habitat suitability now or in the future.” *Id.* at C-13. Third, following stand-replacing events such as wildfire, land managers must “focus on retaining snags that are likely to persist until late-successional conditions have developed and the new stand is again producing large snags.” *Id.* at C-14. In general, the larger the snag, the longer it will remain standing

In the wake of western wildfires in 2002 that burned millions of acres of public forests within the range of the northern spotted owl, conservationists sought to curtail post-fire logging efforts within the footprint of the NFP. In what was the first test of the NFP's post-fire logging direction for LSRs, they challenged the BLM's offering of about 800 acres of commercial timber burned by the Timbered Rock Fire, located almost entirely within the Elk Creek LSR in southern Oregon, arguing that BLM's planned removal of large diameter snags (old-growth trees prior to the fire) in post-fire logging sales violated the NFP because the project's purpose was to recover the economic value of the burned timber, and the NFP expressly precluded salvage logging in LSRs for this purpose. The district court agreed,²¹¹ and the Ninth Circuit upheld the district court.²¹² The appeals court made clear that if post-fire logging occurs within LSRs, in order to meet the NFP's objectives of developing old-growth forest characteristics in post-fire LSRs and to maintain late-successional forest habitat, post-fire logging must retain the largest snags likely to persist until the stand is again producing snags (about 80 years in the future).²¹³ Since permissible

in a forest affected by fire. Finally, the NFP states that within LSRs, salvage "will not be driven by economic or timber sale program factors." NFP Appendix F, at F-21.

²¹¹ *Oregon Nat. Res. Council Fund v. Brong*, 2004 WL 2554575 (D. Or. 2004).

²¹² *Oregon Nat. Res. Council Fund v. Brong*, 492 F.3d 1120 (9th Cir. 2007).

²¹³ *Id.* at 1127–31. The *Brong* decision proved to be the high-water mark for post-fire logging projects within LSRs, as its precedential value was overlooked by ensuing decisions. *See e.g.*, *Cascadia Wildlands v. Thrailkill*, 806 F.3d 1234 (9th Cir. 2015) (affirming district court's authorization of a salvage sale of 1,200 acres from LSRs affected by the Douglas Complex fires, including the incidental take of 24 spotted owls); *Karuk Tribe v. Stelle*, 671 F. App'x 507 (9th Cir. 2016) (affirming district court's authorization of a salvage sale of 5,700 acres from LSRs affected by the Westside Complex fires, including the incidental take of 103 spotted owls). Courts appeared reluctant to authorize injunctive relief in post-fire salvage logging cases after *Brong* due to an unproven government argument that post-fire logging reduces wildfire risk. With wildfires becoming larger and more destructive, courts appeared inclined to allow such logging to go forward, even though the best available science does not support the contention that salvage logging reduces future wildfire risk. *See, e.g. Klamath-Siskiyou Wildlands Center et al. v. Grantham et al.*, 2:18-cv-02785-TLN-DMC, at *8 (May 31, 2019) (order granting the defendants' motion for a stay of the preliminary injunction because "Federal Defendants contend that the Forest Service will lose the source of funds necessary to implement specific Project activities which will reduce the likelihood of a future catastrophic fire. In its initial order, this Court determined that the harm to Federal Defendants was not irreparable because the Forest Service would not be barred from eventually implementing the Project if it succeeded at a later stage in the litigation. But based on evidence subsequently provided by Federal

logging would necessarily be limited to removing smaller snags, the economic viability of such harvests was questionable.

Although the drafters of the NFP clearly understood that wildfire would alter LSRs, they also intended fire to play its natural role and therefore restricted most post-fire logging.²¹⁴ 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 NFP's LSR network will be undermined.²¹⁵

VI. Exempting the O & C Lands from the NFP: the Western Oregon Plan Revision(s)

Conservationists were not the only parties that challenged the legality of the Northwest Forest Plan in 1994: the timber industry and timber-dependent counties also expressed displeasure through the courts. Even though most challenges to the NFP were transferred to Judge Dwyer, one timber industry challenge, *Northwest Forestry Association v. Shea*,²¹⁶ remained in the D.C. District Court and would prove consequential for the Pacific Northwest timber industry.

Defendants, it appears that if the injunction remains in place, non-enjoined portions of the Project may actually become permanently futile if the enjoined salvage operations are precluded from taking place immediately”).

²¹⁴ Letter from Dr. Jerry Franklin to Patricia A. Grantham, Forest Supervisor, Klamath National Forest, *Comments on the Draft Environmental Impact Statement for the Westside Fire Recovery Project*, 1-4 (April 6, 2015) (on file with authors).

²¹⁵ Recall Judge Dwyer's warning, endorsed by the Ninth Circuit, that “any more logging sales than the plan contemplates would probably violate the laws. Whether the plan and its implementation will remain legal will depend on future events and conditions.” *Seattle Audubon Soc. v. Lyons*, 871 F. Supp. 1291, 1300 (W.D. Wash. 1994), *aff'd sub nom. Seattle Audubon Soc. v. Moseley*, 80 F.3d 1401 (9th Cir. 1996).

²¹⁶ No. 94-1031-TPJ (D. D.C. filed May 11, 1994),

In *Shea*,²¹⁷ the industry charged BLM with a violation of the Oregon and California Lands Act (OCLA) of 1937 by creating reserves for wildlife and older forests in the nascent NFP.²¹⁸ After a labyrinth of procedural maneuvers, the industry and the Bush administration settled the case in 2003.²¹⁹ The settlement agreement aimed to increase the timber harvest across the range of the northern spotted owl, not just on O&C lands managed by the BLM by: 1) amending the NFP to eliminate both the ACS and the S&M program; 2) conducting a status review of both the northern spotted owl and the marbled murrelet, with the goal of delisting the species and their designated critical habitats;²²⁰ and 3) amending the NFP to eliminate any reserves on BLM O&C lands except

²¹⁷ The names of the parties changed several times over the 15 years that the case remained active: the Northwest Forestry Association would be superseded by the American Forest Resources Council, and Patrick Shea – Director of the BLM in the mid-1990s – would be replaced by Kathleen Clarke, who was BLM director during the second Bush Administration.

²¹⁸ For a review of the OCLA, *see* Blumm & Wigington, *supra* note 27 at 7-22 (explaining the forces that led to the enactment of the OCLA); and Scott & Brown, *supra* note 31, at 267, 284.

²¹⁹ The Bush Administration entered into numerous such “sweetheart settlements” with regulated industries like the timber industry. *See, e.g.,* Michael C. Blumm, *The Bush Administration's Sweetheart Settlement Policy: A Trojan Horse Strategy for Advancing Commodity Production on Public Lands*, 34 *Env'tl. L. Rep. (ELI)* 10397 (2004).

²²⁰ Under the settlement agreement, in 2003 the United States Fish and Wildlife Service (FWS) undertook a status review of both the northern spotted owl and marbled murrelet. Although the reviews concluded that the species should remain listed under the Endangered Species Act, the Bush FWS undertook several failed attempts to dramatically reduce the extent of critical habitat for the species. *See* Department of the Interior, Inspector General: *Investigative Report of Alleged Improper Influence by the Secretary of the Interior in the FWS' Scientific Process* (Dec. 10, 2019) (finding political manipulation of scientific information by FWS Deputy Director Julie MacDonald in the designation of northern spotted owl critical habitat). Eventually, FWS would “successfully” designate spotted owl critical habitat in 2012. Fish and Wildlife Service, *Designation of Revised Critical Habitat for the Northern Spotted Owl, Final Rule*, 77 *Fed. Reg.* 71,875 (Dec. 4, 2012). The timber industry and several counties then challenged the 2012 critical habitat designation in a case that became procedurally complex, and which eventually settled. *See Carpenters Industrial Council v. Salazar*, No. 13-CV-00361-RJL (D.D.C. filed March 21, 2013). As part of that settlement, FWS reconsidered the 2012 critical habitat designation and proposed to eliminate critical habitat on approximately 200,000 acres of O&C lands in Oregon. Fish and Wildlife Service, *Revised Designation of Critical Habitat for the Northern Spotted Owl, Proposed Rule*, 85 *Fed. Reg.* 48,487 (Aug. 11, 2020). The final revised critical habitat rule dramatically increased the scope of the exemption by 94%, eliminating 3.4 million acres of suitable northern spotted owl habitat across three states on lands managed by the Forest Service and the BLM. Fish and Wildlife Service, *Revised Designation of Critical Habitat for the Northern Spotted Owl, Final Rule*, 86 *Fed. Reg.* 4,820 (Jan. 15, 2021). A legal challenge to the rule by conservation interests is pending. *Audubon Soc'y of Portland v. FWS*, 21-cv-00443 (Mar. 23, 2021) (complaint for declaratory and injunctive relief). The Biden administration twice announced that it would delay the effective date of the final rule, Fish and Wildlife Service, *Revised Designation of Critical Habitat for the*

those habitat protections required to avoid jeopardy under the ESA.²²¹ The Bush administration's close ties to the timber industry were evident as the administration quickly took action to implement what conservationists considered a sweetheart settlement, setting off another flurry of litigation.²²²

One of the fundamental reforms worked by the NFP was its recognition of the interconnectedness of the federal lands managed by the Forest Service and BLM. The latter have been logged more heavily, largely due to the influence of the Oregon and California Lands Act, a 1937 statute that has been misinterpreted to call for dominant timber use under pressure from local counties that are heavily dependent on their share of the revenues from logging.²²³ The scientifically-grounded NFP rejected treating BLM and Forest Service lands disparately, a decision that neither BLM, the counties, nor the timber industry has ever fully accepted.

Although most aspects of the 2003 sweetheart settlement agreement between the Bush Administration and the timber industry did not manifest as intended, one provision of the agreement—calling for a revision of BLM's resource management plans (RMPs) for the O&C lands—was more durable. In 2005, BLM announced its intention to revise its western Oregon RMPs, claiming that “new information” compelled a revision of the NFP as it applied to the O&C

Northern Spotted Owl; Delay of Effective Date, 86 Fed. Reg. 11,892 (March 1, 2021) (extending effective date until April 30, 2021); Fish and Wildlife Service, *Revised Designation of Critical Habitat for the Northern Spotted Owl; Delay of Effective Date*, 86 Fed. Reg. 22,876 (April 30, 2021) (extending effective date until Dec. 15, 2021), which drew a lawsuit from the timber industry and the O&C counties, *AFRC v. Williams*, 1:21-cv-00601 (March 5, 2021) (seeking declaratory and injunctive relief). FWS subsequently promulgated a new final rule excluding approximately 200,000 acres of critical habitat from O&C lands in the Harvest Land Base. Fish and Wildlife Service, *Final rule; Withdrawal and Revision, Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Northern Spotted Owl*, 86 Fed. Reg. 62,606 (Nov. 10, 2021).

²²¹ Bureau of Land Management, Settlement Agreement in *American Forest Resource Council et al. v. Clarke*, Civil No. 94-1031 TPJ (D.D.C.), *appeal pending*, No. 02-5024 (D.C. Cir.) (last accessed Oct. 20, 2018), https://www.blm.gov/or/plans/wopr/files/settlement_agreement_text.pdf.

²²² See, *supra* Sections V.A and V.B.

²²³ *Headwaters v. BLM*, 914 F.2d 1174 (9th Cir. 1990); discussed in Blumm & Wigington, *supra* note 27, at 24-29 (explaining the OCLA and its judicial interpretation).

lands because timber harvests had been less than predicted under the NFP and needed to be increased in order to comply with the OCLA.²²⁴ Consequently, in 2007, BLM released a draft EIS on revised RMPs that it coined the “Western Oregon Plan Revision” (WOPR),²²⁵ which would have dramatically reduced riparian buffers and retained few protections for old-growth forests.²²⁶

Conservationists filed three separate legal challenges to WOPR, arguing that the new plans authorized more logging than was sustainable under various public lands laws, and that the failure to undertake section 7 ESA consultation was clear error.²²⁷ The timber industry filed its own challenge²²⁸ arguing the opposite: that the new RMPs failed to authorize the maximum amount of timber harvest required by the OLCA.²²⁹

The courts never addressed the challenges to the revised RMPs because in January 2009, the Obama administration issued a press release acknowledging legal error in failing to consult on the WOPR, attempted to “withdraw” the revised RMPs, and announced that the NFP would once

²²⁴ U.S. DEP’T OF INTERIOR, BUREAU OF LAND MGMT., ANALYSIS OF THE MANAGEMENT SITUATION 7-8 (2005).

²²⁵ U.S. DEP’T OF INTERIOR, BUREAU OF LAND MGMT., DRAFT ENVIRONMENTAL IMPACT STATEMENT (2005). For children of the 1980s, BLM’s acronym recalled the War Operations Plan Response, a fictitious military supercomputer originally programmed to predict possible outcomes of nuclear war that was hacked by a young computer programmer played by Matthew Broderick in the 1983 film “War Games.”

²²⁶ U.S. DEP’T OF INTERIOR, BUREAU OF LAND MGMT., FINAL ENVIRONMENTAL IMPACT STATEMENT (2008).

²²⁷ *Pacific Rivers Council v. Shepard*, No. 09-CV-58-ST (D. Or. filed Jan. 15, 2009); *Forest Service Employees for Environmental Ethics v. FWS*, No. 09-CV-6019-AA (D. Or. filed Jan. 15, 2009); *Oregon Wild v. Shepard*, No. 09-CV-60-PK (D. Or. filed Jan. 15, 2009); *American Forest Resources Council v. Kempthorne*, No. 09-CV-3-ESH (D. D.C. filed Jan. 2, 2009).

²²⁸ BLM refused to engage in ESA section 7 consultation on the revised RMPs under the mistaken impression that land management plans are not final agency actions subject to ESA consultation. *See Bennett v. Spear*, 520 U.S. 154 (1997) (requiring consultation on ongoing federal actions such as management plans). Recognizing this error and fearing that it would not obtain the benefit of a new, less-restrictive management plan, the timber industry moved to enforce the *Shea* settlement agreement, arguing that the failure to consult was an anticipatory breach of contract, a creative strategy that would ultimately prove unsuccessful in compelling consultation. *American Forest Resource Council et al. v. Clarke*, No. 94-CV-1031-JR, Dkt. No. 83 (filed Oct. 30, 2008) (Plaintiffs’ Motion to Enforce October 17, 2003 Settlement Agreement). The court denied the motion.

²²⁹ *American Forest Resources Council et al. v. Salazar et al.*, 1:11-cv-01174-RJL (D.DC June 27, 2011) (complaint).

again govern land management on the O&C lands.²³⁰ However, since BLM lacked authority to simply “withdraw” a duly-enacted RMP,²³¹ the industry quickly filed suit challenging BLM’s withdrawal of WOPR without complying with FLPMA’s public involvement requirements.²³² The D.C. district court agreed with the industry and resurrected WOPR, effectively removing the O&C lands from the NFP.²³³

Conservationists promptly filed a new suit, again challenging the resurrected RMPs on several grounds, including charging that BLM violated the ESA by promulgating the revised plans without complying with the consultation requirements of the ESA.²³⁴ Since the ESA violation was clear, the federal government did not attempt to defend the WOPR, but timber interests intervened in the litigation to unsuccessfully defend the new RMPs.²³⁵ As a result, in 2013 the NFP was once again the law of the land.

Somewhat shockingly, the Obama Administration responded to the resurrection of the NFP on BLM lands by announcing that it would once again attempt to revise the western Oregon RMPs to develop an alternative land management framework to the NFP.²³⁶ This new planning effort (referred to by some critics as WOPR Jr.) again focused on reducing the size of riparian and old

²³⁰ United States Department of Interior, *News Release: Interior Withdraws Legally Flawed Plan for Oregon Forests, Presses For Sustainable Timber Harvests* (July 16, 2009), available at <https://www.fws.gov/home/feature/2009/pdf/07-16-09FINALNorthwestForestPlan-Announcement.pdf>.

²³¹ *See, e.g., Seattle Audubon Society v. Robertson*, 1991 WL 180099, *9 (W.D. Wash. 1991) (rejecting the Forest Service’s attempted adoption of a new management plan for national forests within the range of the northern spotted owl through a Federal Register notice without complying with the public participation requirements of NFMA); *Klamath Siskiyou Wildlands Center v. Boody*, 468 F.3d 549, 556–57 (9th Cir. 2006) (same, regarding compliance with FLPMA).

²³² *Douglas Timber Operators, Inc. v. Salazar*, 774 F. Supp. 2d 245 (D.D.C. 2011).

²³³ *Id.*

²³⁴ *Pac. Rivers Council v. Shepard*, 2012 WL 950032 (D. Or. 2012).

²³⁵ *Pacific Rivers Council v. Shepard*, No. 12–35570 (9th Cir. Mar. 1, 2013) (granting motion to dismiss appeal for lack of jurisdiction).

²³⁶ Bureau of Land Management, *Notice of Intent to Revise Resource Management Plans and an Associated Environmental Impact Statement for Six Western Oregon Districts of the Bureau of Land Management*, 77 Fed. Reg. 14,414 (March 9, 2012).

forest reserves to increase “management flexibility” enable timber harvests on the O&C lands.²³⁷ BLM issued a draft EIS for the re-revised RMPs in 2015, a final EIS in 2016, and a final RMPs shortly thereafter.²³⁸

Conservationists once again challenged the revisions in court, maintaining that they deviated from the NFP without a rational explanation and would result in more timber harvest than listed species could withstand.²³⁹ They lost their challenge to the revised WOPR in the district court, and the Ninth Circuit affirmed.²⁴⁰ Both courts ruled that the conservation plaintiffs failed to demonstrate that BLM and consulting agencies did not consider the environmental consequences of BLM’s withdrawal from the NFP, and thus did not violate either NEPA or the ESA.²⁴¹

For their part, the timber industry and the counties responded to the western Oregon revised plans with their own lawsuit, arguing in the D.C. district court that the new plans would fail to produce 500 million board-feet of timber required by the OCLA.²⁴² Judge Leon ruled in favor of the plaintiffs, holding that the OCLA imposes a nondiscretionary agency obligation to produce 500 million board-feet of timber per year from the O&C lands.²⁴³ Because BLM had set the upper

²³⁷ Bureau of Land Management, *Western Oregon Plan Revisions News* (Oct. 2006), available at <https://www.blm.gov/or/plans/wopr/files/Newsletter5.pdf>.

²³⁸ Bureau of Land Management, *RMPs for Western Oregon*, available at <https://www.blm.gov/programs/planning-and-nepa/near-you/oregon-washington/rmps-westernoregon>.

²³⁹ *Pacific Rivers Council et al. v. BLM*, No. 16-CV-01598-JR (D. Or. filed Aug. 8, 2016).

²⁴⁰ *Pac. Rivers v. U.S. Bureau of Land Mgmt.*, 2019 WL 1232835 (D. Or. Mar. 15, 2019), *aff’d sub nom. Rivers v. Bureau of Land Mgmt.*, 815 F. App’x 107 (9th Cir. 2020) (holding that BLM considered the environmental consequences of the BLM seceding from the NFP, and that the consulting agencies did not need to consider the consequences on listed species of the jurisdictional change from the NFP to the revised RMPs).

²⁴¹ *Id.*

²⁴² *American Forest Resources Council v. Kornze*, No. 16-CV-1599-RJL (D. D.C. Aug. 5, 2016); *Association of Oregon and California Counties v. Kornze*, No. 16-CV-1602-RJL (D. D.C. Aug. 5, 2016).

²⁴³ *Am. Forest Res. Council v. Hammond*, 422 F. Supp. 3d 184, 189–91 (D.D.C. 2019), *appeal filed sub nom. Am. Forest Res. Council v. United States*, 20-5008 (D.C. Cir. Jan. 24, 2020). Judge Leon rejected the government’s argument that in fact, the OCLA requires BLM to offer for sale 500 MMbf *unless or until BLM determines the sustained yield calculation*, which BLM did in the 2016 RMPs. BLM also argued that

limit of timber harvest at only approximately 205 million board feet per year, and because “shall means shall,” Judge Leon held that BLM’s revised plans were arbitrary and capricious.²⁴⁴

In November 2021, Leon issued his remedy ruling but did not vacate the 2016 plans because that would leave the O & C lands in “a state of unregulated confusion,” pending their revision.²⁴⁵ Moreover, the judge refused to require BLM to set the annual sustained yield capacity at least 500 million board and refused to enjoin consultation under the ESA.²⁴⁶ Instead, Leon ordered BLM to report “what aspects, if any of the Wildlife Provisions remain permissible” in light of the court’s view that a revision of BLM’s land plans consistent with the O&C Act “will almost certainly result in an upward revision of annual sustained yield capacity.”²⁴⁷

What this decision means for the revision of the BLM plans is hardly clear. Judge Leon clearly thought that the allowable sale quantity established in the 2016 plans was too low, but he also expressly recognized that setting the ASQ was subject to BLM’s discretion, and that the agency was subject to legal requirements other than those of the OCLA, like the ESA and the other wildlife statutes.²⁴⁸ Although the judge warned that his reluctance “to unduly constrain [BLM’s] discretion” should not be interpreted as giving the agency “a blank check to proceed in any manner

the lack of sufficient federal appropriations for forest management, other laws (such as the ESA), and the lack of a “normal market” also precluded BLM from meeting its sustained yield calculation; but Judge Leon rejected these arguments as well. *See id.*

²⁴⁴ *Id.*

²⁴⁵ *American Forest Resource Council v. Nedd*, Civil Case No. 16-01599 (D.D.C. Nov. 19, 2021), at 7.

²⁴⁶ *Id.* at 9-11.

²⁴⁷ *Id.* at 12, 10.

²⁴⁸ *See id.* at 10 (“. . . BLM retains discretion to determine and declare the annual sustained yield capacity going forward.”), 11-12 (giving BLM 120 days to complete wildlife consultations under other statutes). BLM argued in its summary judgment brief that it was exactly its expert agency discretion that led to the setting of the ASQ at approximately 237 MMBf annually (with a 40% variation in either direction), in light of the agency’s competing legal obligations, market forces, and agency capacity. Federal Defendant’s Response in Opposition to Plaintiffs’ Motion for Summary Judgment at 27-37, *Swanson Group Mfg. LLC, et al. v. Bernhardt*, No. 1:15-cv-01419; Federal Defendant’s Reply in Support of Cross Motion for Summary Judgment at 11-13, *Swanson Group Mfg. LLC, et al. v. Bernhardt*, No. 1:15-cv-01419. Leon’s order recalls the parable of the wise man who commands an intrepid youth to bring him yet another, different rock.

and at any pace,” it is hard to see how his order will in fact compel BLM to double the allowable sale quantity as the timber industry sought, particularly on any relatively short timeline.²⁴⁹ Moreover, because Judge Leon partially stayed his order vacating the plans pending their revision, the extent of immediate on-the-ground effects are unclear.²⁵⁰ Should the BLM undertake a revision of the 2016 RMPs as Judge Leon and the timber plaintiffs envision, it will further corrode the underlying ecological integrity of the NFP that was premised on BLM’s inclusion to meet at least the Forest Service’s habitat objectives throughout the range of the owl.

VII. Revising the Northwest Forest Plan

The National Forest Management Act (NFMA) requires the Forest Service to revise land and resource management plans every fifteen years in order to address changes affecting the management of natural resources for multiple uses.²⁵¹ Although the NFP claimed to be a 100-year plan,²⁵² the fifteen-year revision requirement applies equally to the nation’s first ecosystem management plan, which amended nineteen national forests and six BLM districts in three states.²⁵³ In 2015, the Forest Service announced that it would undertake revision of the plan and

²⁴⁹ The industry sought at least 500 million board-feet harvested annually, *see id.* at 9-10, whereas the 2016 BLM plans set allowable sale quantities at approximately 237 million board-feet.

²⁵⁰ *See infra* note 353.

²⁵¹ 16 U.S.C. § 1604(f)(5).

²⁵² Valerie Rapp, United States Forest Service, *Northwest Forest Plan—The First 10 Years (1994–2003): First-Decade Results of the Northwest Forest Plan*, 2. PNW-GTR-720 (2008), available at https://www.fs.fed.us/pnw/pubs/pnw_gtr720.pdf; *see also*, UNITED STATES FOREST SERVICE AND BUREAU OF LAND MANAGEMENT, FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT ON MANAGEMENT OF HABITAT FOR LATE-SUCCESSIONAL AND OLD-GROWTH FOREST RELATED SPECIES WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL, S-12, S-13, 2-69, 2-70, 3&4-37, 3&4-43, 3&4-45, 3&4-46, 3&4-66, 3&4-116, 3&4-117, 3&4-123, 3&4-200, 3&4-232, 3&4-247, 3&4-249 (1993) (referencing 100-year timeframe for effects analysis and recovery of degraded environmental conditions).

²⁵³ The NFP was drafted under the Forest Service’s 1982 planning rule but employed many of the same landscape planning concepts called for in the 2012 regulations. For example, the 2012 planning rule embraces landscape connectivity, 36 C.F.R. §§ 219.8(a)(1), (a)(3)(i), (a)(3)(i)(E); 219.9(a)(1), managing landscapes for ecosystem structure, function, and composition, *id.* at § 219.9(a)(1); course and fine filter management approaches, *id.* at § 219.9; and robust monitoring, *id.* at 219.12. The BLM essentially adopted the Forest Service’s planning framework when it jointly promulgated the NFP, a decision to which Judge

hosted several public roundtables concerning various issues relevant to the revision.²⁵⁴ Then, in 2018, the Forest Service initiated a literature review of scientific information that had come to light since the plan's adoption in 1995, eventually producing a peer-reviewed "Science Synthesis."²⁵⁵ In 2020, the agency released a bioregional assessment that explored planning strategies for managing public lands while considering community and stakeholder interests in advance of the anticipated plan revisions.²⁵⁶

Although the Forest Service has yet to publicly officially begin the forest plan revision process under the agency's 2012 planning rule,²⁵⁷ these early analyses are a prelude to a revision of the plan, likely to begin in the fall 2022 and continue for several years.²⁵⁸ Given Judge Dwyer's prophetic judicial holdings about the need for federal forest managers to work together to address the ecosystem-wide ecological challenges of the spotted owl region,²⁵⁹ coupled with the Forest

Dwyer deferred. *Seattle Audubon Soc. v. Lyons*, 871 F. Supp. 1291, 1313–14 (W.D. Wash. 1994), *aff'd sub nom. Seattle Audubon Soc. v. Moseley*, 80 F.3d 1401 (9th Cir. 1996).

²⁵⁴ See United States Forest Service, https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3856794.pdf.

²⁵⁵ United States Forest Service, *Northwest Forest Plan science synthesis released*, https://www.fs.fed.us/psw/news/2018/20180614_sciencesynthesis.shtml (June 14, 2018). The purpose of the Science Synthesis was to capture the best available science to inform the revision process. See SYNTHESIS OF SCIENCE, *supra* note 11).

²⁵⁶ United States Forest Service, *Bioregional Assessment of Northwest Forests 3* https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd762774.pdf (July 2020).

²⁵⁷ 36 C.F.R. Part 219 (2012).

²⁵⁸ Outstanding questions include whether the Forest Service will revise the regional framework of the NFP itself (which amended nineteen Forest Service and six BLM land plans) or revise each plan individually; the timing of congressional appropriations necessary to accomplish the revision; and whether local forest, regional, or national staff will be responsible for the revision effort. The Chief of the Forest Service and the Secretary of Agriculture must sign off on the revision strategy, which has yet to occur. Also, the congressional delegation in the Pacific Northwest has said surprisingly little about the NFP revision, but if that were to change, it could alter the trajectory of the process. Early indications suggest that the Forest Service will begin the revision effort in the southern part of the spotted owl's range, in northern California and southern Oregon on the Six Rivers, Shasta-Trinity, Klamath, Modoc, Mendocino, Lassen, Fremont-Winema, and Rogue River-Siskiyou National Forests. Not coincidentally, this subregion has seen an exponential increase in high-severity wildfire that has consumed a great deal of northern spotted owl suitable habitat over the past two decades. SYNTHESIS OF SCIENCE, *supra* note 11, at 39.

²⁵⁹ *Seattle Audubon Soc. v. Lyons*, 871 F. Supp. 1291, 1300 (W.D. Wash. 1994), *aff'd sub nom. Seattle Audubon Soc. v. Moseley*, 80 F.3d 1401 (9th Cir. 1996) ("The order now entered, if upheld on appeal, will mark the first time in several years that the owl-habitat forests will be managed by the responsible agencies

Service's 2012 planning rule that places ecological integrity at the heart of forest planning²⁶⁰ and new environmental stressors such as climate change and large-scale wildfires,²⁶¹ the agencies have considerable work ahead. Although the history of the NFP may suggest that the challenges ahead are largely ecological in nature, we think that the real challenges are largely socioeconomic.²⁶²

A. The Socioeconomic Dimension

As a society, we have learned a great deal about the ecological workings of the Douglas-fir and hemlock forests of western Washington, Oregon, and California, including that they are: 1) enormously biodiverse; 2) degraded from historic management (including from wildfire suppression); 3) serve as an essential source of drinking water for millions; and 4) represent important ways of life for many Pacific Northwesterners, including Indigenous peoples.²⁶³ Although these public forests have not yielded all their secrets, we know enough now to act to preserve them for future generations. As Judge Dwyer noted,²⁶⁴ until society is willing to preserve

under a plan found lawful by the courts. It will also mark the first time that the Forest Service and BLM have worked together to preserve ecosystems common to their jurisdictions”).

²⁶⁰ See 36 C.F.R. §§ 219.8 (“sustainability”), 219.9 (“diversity of plant and animal communities”), 219.19 (defining “ecological integrity” as “the quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence”); see also Susan Jane M. Brown, American Bar Association, *A Blueprint for National Forest Management in the Biden Administration* (April 12, 2021), available at https://www.americanbar.org/groups/environment_energy_resources/publications/fr/20210204-a-blueprint-for-national-forest-management/ (arguing that consistent with NFMA and other multiple-use statutes and in order to address the myriad challenges facing the agency, the Forest Service should adopt an interpretive rule establishing ecological integrity the lodestar for federal forest management).

²⁶¹ SYNTHESIS OF SCIENCE, *supra* note 11, at 13-45.

²⁶² See Charnley, *supra* note 172, at 2 (2006).

²⁶³ See generally SYNTHESIS OF SCIENCE, *supra* note 11; Spies et al., *supra* note 127.

²⁶⁴ *Seattle Audubon Soc. v. Evans*, 771 F. Supp. 1081, 1096 (W.D. Wash.), *aff'd sub nom. Seattle Audubon Soc'y v. Evans*, 952 F.2d 297 (9th Cir. 1991) (“To bypass the environmental laws, either briefly or permanently, would not fend off the changes transforming the timber industry. The argument that the mightiest economy on earth cannot afford to preserve old growth forests for a short time, while it reaches an overdue decision on how to manage them, is not convincing today. It would be even less so a year or a century from now”).

the remaining ancient forest required by dependent species like spotted owls, marbled murrelets, and salmon—and to address the root causes of declining forest health—there will be conflicts over efforts to continue to log to meet socioeconomic concerns when the best available science counsels against old-growth forest harvests.

Given the underling socioeconomic issues, and the fact that the regional economy is no longer dependent on the timber industry to drive economic prosperity,²⁶⁵ we think that a revised NFP must be premised on the reality that for some communities and individuals, working in the woods is an essential aspect of their identity. Rural communities represent an important thread of the fabric of the Pacific Northwest, providing most of the workforce and infrastructure sustaining forest restoration and management.²⁶⁶ As long as national forest and O&C lands are managed for multiple uses, some timber harvests on federal public lands will remain a fixture in the region, although one downsized in response to changing domestic and international markets and pressures.²⁶⁷ Future timber harvests can provide streams of revenue for timber-dependent communities. But it would be disingenuous to suggest that timber can or should be the only source of rural economic development.

A robust landscape restoration program could provide living-wage jobs for local communities, although it needs to be coupled with other socioeconomic programs to enhance socioeconomic resilience. Arising out of the 1990s labor movement, the “just transition” principle is that a healthy economy and a clean environment can coexist. According to this principle, achieving this coexistence would not cost workers or communities their health, environment, jobs

²⁶⁵ SYNTHESIS OF SCIENCE, *supra* note 11, at 107-126.

²⁶⁶ As discussed *supra* section IV.E, the NFP included programs such as the NEAI, aimed at addressing the expected decline in regional employment in the forest products industry, but these programs failed to live up to expectations for many reasons, including lack of funding and agency confusion regarding their role in stimulating economic development.

²⁶⁷ SYNTHESIS OF SCIENCE, *supra* note 11, at 107-126.

or economic assets, and any unavoidable losses would be fairly compensated, with those most affected involved in the process of crafting solutions.²⁶⁸ Just transition approaches have been suggested for declining coal-producing regions,²⁶⁹ communities dependent on fossil fuel development,²⁷⁰ and other communities where historically steady income streams have become far less reliable or disappeared altogether.²⁷¹

A just transition for timber country should be a cornerstone of NFP revision. This socioeconomic framework could be developed in partnership with regional academic institutions and nongovernmental organizations,²⁷² and will require sustained federal investment in the socioeconomic well-being of rural communities like those provided by the Secure Rural Schools

²⁶⁸ Just Transition Alliance, *What is Just Transition?* (July 6, 2021), <http://jtalliance.org/what-is-just-transition/>; see also Climate Justice Alliance, *Just Transition: A Framework for Change* (July 6, 2021), <https://climatejusticealliance.org/just-transition/>.

²⁶⁹ Autumn Spanne, TREEHUGGER, *Just Transition: History, Principles, and Examples* (June 30, 2021), <https://www.treehugger.com/just-transition-history-principles-and-examples-5190469>.

²⁷⁰ See Judy Fahys, *As the US Pursues Clean Energy and the Climate Goals of the Paris Agreement, Communities Dependent on the Fossil Fuel Economy Look for a Just Transition*, INSIDE CLIMATE NEWS (June 28, 2021), <https://insideclimatenews.org/news/28062021/coal-communities-just-transition-clean-energy-fossil-fuels/>.

²⁷¹ See Philip Gas, *In Search of Just Transition: Examples From Around the World* (April 8, 2019), INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, <https://www.iisd.org/articles/just-transition-examples>.

²⁷² Examples of academic institutions include Oregon State University's Extension Service, which works with local communities in the region to develop sustainable land management and community resilience programs and techniques, and the Ecosystem Workforce Program at the University of Oregon, which aims to achieve ecological health, economic prosperity, and democratic governance through research and education. See Oregon State University, OSU Extension Service, <https://extension.oregonstate.edu/forests> (July 14, 2021); University of Oregon Ecosystem Workforce Program, <http://ewp.uoregon.edu/> (July 14, 2021). Nongovernmental organizations such as Headwaters Economics that have long been engaged in land management and socioeconomic policy development have also advanced worthwhile alternative approaches to socioeconomic resilience in natural resource-dependent communities. See Headwaters Economics, <https://headwaterseconomics.org/public-lands/> (July 14, 2021).

and Community Self-Determination Act of 2000²⁷³ and the Payments in Lieu of Taxes program.²⁷⁴

An equitable socioeconomic transition for timber country must be a key component of NFP revision and would be consistent with similar proposals advanced by the Biden administration.²⁷⁵

B. Ensuring Ecological Integrity

After addressing the socio-economic issues, a revised NFP must ensure the ecological integrity of the public forest lands within the range of the northern spotted owl. The best available science is clear that the remaining mature and old growth forests in the Pacific Northwest are essential to combating climate change,²⁷⁶ providing clean drinking water for a growing populace,²⁷⁷ and are vital places for wildlife to thrive²⁷⁸ and humans to recreate.²⁷⁹ As Judge

²⁷³ 16 U.S.C. § 7101 et seq. The Secure Rural Schools program “provides critical funding for schools, roads, and other municipal services to more than 700 counties across the U.S. and Puerto Rico...to help stabilize the funds available to rural counties” for essential county services such as search and rescue, libraries, mental health services, and other services. United States Forest Service, *Secure Rural Schools Program* (July 14, 2021), <https://www.fs.usda.gov/working-with-us/secure-rural-schools>.

²⁷⁴ 31 U.S.C. § 6901 et seq. The Payments in Lieu of Taxes program, enacted in 1976, provides federal payments to states and local governments to help offset losses in property taxes due to the existence of nontaxable federal lands within their boundaries. The program provides payments based on acreage, not the intensity of development like severance taxes. See Department of the Interior, *Payment in Lieu of Taxes*, <https://www.doi.gov/pilt/> (July 14, 2021).

²⁷⁵ See The White House, *Fact Sheet: President Biden’s Leaders Summit on Climate* (April 23, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/23/fact-sheet-president-bidens-leaders-summit-on-climate/> (discussing Biden administration strategies for addressing the climate crisis). See also, Oregon Wild, *A Sustainable Redesign of the Secure Rural Schools Act* (Aug. 20, 2021), <https://oregonwild.org/forests/climate-change/sustainable-redesign-secure-rural-schools-act> (proposing changes to the Secure Rural Schools Act to create carbon markets to generate revenue to support timber-dependent communities).

²⁷⁶ Olga N. Krankina, Mark E. Harmon, Frank Schneckenger & Carlos A. Sierra, *Carbon balance on federal forest lands of Western Oregon and Washington: The impact of the Northwest Forest Plan*, 286 FOREST ECOLOGY AND MGMT. 171 (2012); James R. Strittholt, Dominick A. Dellasala & Hong Jiang, *Status of Mature and Old-Growth Forests in the Pacific Northwest*, 20 CONS. BIO. 2, 363 (2006); Olga N. Krankina, Dominick A. DellaSala, Jessica Leonard & Mikhail Yatskov, *High-Biomass Forests of the Pacific Northwest: Who Manages Them and How Much is Protected?* ENVT’L MGMT. (June 2014).

²⁷⁷ Patric Brandt, David J. Abson, Dominick A. DellaSala, Robert Feller & Henrik von Wehrden, *Multifunctionality and biodiversity: Ecosystem services in temperate rainforests of the Pacific Northwest, USA*, 169 BIODIVERSITY CONS. 362 (2014).

²⁷⁸ *Id.*

²⁷⁹ *Id.*

Dwyer stated, it is past time for “the mightiest economy on earth” to “reach an overdue decision on how to manage”²⁸⁰ mature and old-growth forests by designating these trees and forests as “not suitable for timber production” through the forest plan revision process.²⁸¹ The status of these forests as unsuitable for timber harvest²⁸² would last until the next forest planning cycle (roughly 15-30 years), when society would revisit whether and how they should be managed to meet the needs of present and future generations.²⁸³ The designation therefore would not be permanent.

In 2001, former Forest Service Chief Michael Dombeck issued a moratorium on old-growth forest logging shortly before the Clinton administration left office,²⁸⁴ demonstrating that a cessation of older forest logging is feasible and not a novel concept. Indeed, two of the authors of the NFP have called for an end to mature and old-growth logging as consistent with the best available science.²⁸⁵ They point out that old-growth forests are not necessary to supply a sustained

²⁸⁰ *Seattle Audubon Soc. v. Evans*, 771 F. Supp. 1081, 1096 (W.D. Wash.), *aff'd sub nom. Seattle Audubon Soc'y v. Evans*, 952 F.2d 297 (9th Cir. 1991).

²⁸¹ See 36 C.F.R. §§ 219.7(e)(1)(v) (“suitability of lands”), 219.7(c)(2)(viii), 219.11 (“timber requirements based on the NFMA”).

²⁸² The plan does generally prohibit logging of forests older than 80 years of age in Late-Successional Reserves, designating them as unsuitable for programmed timber harvest and removing any timber volume from LSRs from counting towards the Forest Service’s annual sale quantity, or timber target. United States Forest Service and Bureau of Land Management, *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*, 2, 8, 29 (April 1994). The drafters of the NFP settled on the age of 80 in 1994 because forests that had originated in the early 1900s from large wildfire events (e.g., the Yacolt and Tillamook burns) were beginning to develop older forest characteristics in the 1990s at that time. See JERRY FRANKLIN, NORM JOHNSON & GORDIE REEVES, *THE NORTHWEST FOREST PLAN – A HISTORY* (Oregon St. U. Press, forthcoming). Designating only mature and old-growth trees as not suitable for timber production means younger forest would be suitable for harvest, and also that older forests and trees (particularly those in more frequent fire regimes) could be actively restored to more resilient conditions. Indeed, older “dry” forests are in urgent need of active restoration treatments to reduce stand densities, shift species composition towards more resilient species, and restore important processes such as more frequent fire. See Jerry F. Franklin & K. Norman Johnson, *A Restoration Framework for Federal Forests in the Pacific Northwest*, 110 J. FORESTRY 429, 435 (Dec. 2012).

²⁸³ See 36 C.F.R. § 219.11(a)(2).

²⁸⁴ Douglas Jehl, *Clinton Forest Chief Acts to Stop Logging Of the Oldest Trees*, *The New York Times* A1 (Jan. 9, 2001), <https://www.nytimes.com/2001/01/09/us/clinton-forest-chief-acts-to-stop-logging-of-the-oldest-trees.html>.

²⁸⁵ Jerry Franklin & Norm Johnson, *Opinion: Protect older natural forests in the western Cascades*, *THE REGISTER-GUARD* (April 27, 2021),

yield of timber products because timber harvests using “ecological forestry” practices over thousands of acres of land suitable for harvest would provide substantial economic and ecological benefits.²⁸⁶ They maintain that old-growth forests “simply contribute too much ecologically, socially and spiritually in their current state” to be logged.²⁸⁷ The Biden administration, which has touted its commitment to fighting the climate and species extinction crises,²⁸⁸ could contribute to both through a revised NFP that protects some of the most carbon-rich and biodiverse forests in the world by removing from logging the oldest cohorts of trees.

1. Protecting Biological Diversity

Protecting older forests from programmed timber harvest would address a number of ecological and social challenges associated with federal forest management in the Pacific Northwest, but other existential conflicts will remain. Managers will need to confront the substantial increase in natural disturbance, especially wildfire, over 1994 baseline conditions. As the Pacific Northwest warms and precipitation patterns change,²⁸⁹ experts predict that the region will experience more fires that are larger and more severe than in the past.²⁹⁰ The best available data suggests that patterns of flora and fauna will shift as the climate in the region changes.²⁹¹ In

<https://www.registerguard.com/story/opinion/columns/2021/04/27/guest-view-protect-older-natural-forests-western-cascades-jerry-franklin-norm-johnson/7385736002/>; Henry Houston, *Flattening a Forest: Retired forestry professors, an environmental group and a lawmaker speak out on a proposed logging of mature forestland*, THE EUGENE WEEKLY (May 13, 2021), <https://www.eugeneweekly.com/2021/05/13/flattening-a-forest/>.

²⁸⁶ Jerry Franklin & Norm Johnson, *Opinion: Protect older natural forests in the western Cascades*, THE REGISTER-GUARD (April 27, 2021), <https://www.registerguard.com/story/opinion/columns/2021/04/27/guest-view-protect-older-natural-forests-western-cascades-jerry-franklin-norm-johnson/7385736002/>.

²⁸⁷ *Id.*

²⁸⁸ Proclamation No. 13990, 86 Fed. Reg. 7,037, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis* (Jan. 27, 2021); Proclamation No. 14008, 86 Fed. Reg. 7,619, *Tackling the Climate Crisis at Home and Abroad* (Jan. 27, 2021).

²⁸⁹ U.S. GLOBAL CHANGE RESEARCH PROGRAM, CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 462-513 (2014).

²⁹⁰ SYNTHESIS OF SCIENCE, *supra* note 11, at 13-28, 31-46.

²⁹¹ *Id.*

order to respond, the agencies must evaluate the existing reserve systems (late-successional reserves, riparian reserves, and key watersheds) in order to ensure that the reserve system provides adequate room to migrate²⁹² for plants and animals and for ecological processes to function in a new environment, elements of which may have no regional analogue.²⁹³

a. Reserves

The current Late-Successional Reserve network is premised on static boundaries that do not change and may not reflect the best available habitat for wildlife or even the older forest in a watershed.²⁹⁴ Recent analysis suggests that the administratively and congressionally reserved landscapes in the Pacific Northwest have experienced more high-severity wildfire than other land use allocations.²⁹⁵ In fact, wildfire has made more northern spotted owl habitat unsuitable than from any other cause, including logging.²⁹⁶

²⁹² The 2012 planning rule emphasizes plan content that maintains and restores connectivity of terrestrial and aquatic landscapes, habitat, and habitat function. See 36 C.F.R. §§ 219.8(a)(1), (a)(3)(i), (a)(3)(i)(E), 219.9(a)(1), 219.10(a)(1); see also § 219.9 (definition of “connectivity”). Species movement patterns will shift as the Pacific Northwest warms and precipitation changes in response to climate change. SYNTHESIS OF SCIENCE, *supra* note 11, at 13-28. The regional nature and size of the NFP is especially adaptable for a proactive management strategy that protects and restores landscape connectivity across administrative and ownership boundaries. To adapt to climate change, managers must ensure that native species have ample habitat in which to survive and migrate under predicted future climate scenarios to more suitable climates that are in a relatively undisturbed condition. Thus, a revised NFP must identify and protect functional landscape level connectivity based on the best available science and predictive climate models.

²⁹³ SYNTHESIS OF SCIENCE, *supra* note 11, at 14-19.

²⁹⁴ Jack Ward Thomas, Eric D. Forsman, Joseph B. Lint, E. Charles Meslow, Barry R. Noon & Jared Verner, *A Conservation Strategy for the Northern Spotted Owl: Interagency Scientific Committee to Address the Conservation of the Northern Spotted Owl Report 3* (May 1990); Jerry F. Franklin, *A Conceptual Basis for FEMAT*, J. FORESTRY 22 (April 1994).

²⁹⁵ James D. Johnston et al., *Does conserving roadless wildland increase wildfire activity in western U.S. national forests?*, ENVIRON. RES. LETT. (in press) (2021). By no means does the fact that unmanaged lands may experience greater disturbance suggest that intensively-managed industrial forestlands are more resilient to disturbance; indeed, short-rotation plantations of all ownerships routinely burn hotter, faster, and more intensively than older forests, and are generally depauperate of biodiversity. See Harold S.J. Zald and Christopher J Dunn, *Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape*, ECO. APP. (2018).

²⁹⁶ RAYMOND J. DAVIS ET AL., NORTHWEST FOREST PLAN—THE FIRST 20 YEARS (1994–2013): STATUS AND TRENDS OF NORTHERN SPOTTED OWL HABITATS (2016), Gen. Tech. Rep. PNW-GTR-929. A great deal of spotted owl habitat has been affected by wildfire, but this fact does not mean that spotted owls do not use burned but suitable habitat for some life functions post-fire. See NSO RECOVERY PLAN, *supra* note 292, at

Consequently, in frequent-disturbed landscapes, such as those in the southern part of the spotted owl's range in northern California and southern Oregon, fixed reserves may not be the best strategy to preserve biodiversity and respond to a changing climate where fire is more prevalent on much of the landscape.²⁹⁷ An iterative or flexible terrestrial reserve system would produce neither excessive nor truncated land management. A “boundary-less” reserve system in northern California and southern Oregon could incorporate the provisions of the 2011 recovery plan for the northern spotted owl that calls for managing owl habitat in “dry forests” to maintain essential owl habitat features, but also allows restoration forestry, wildfire risk reduction, and maintenance treatments (including prescribed fire) in owl habitat.²⁹⁸ Such an approach would protect existing habitat to buffer against disturbance while new, suitable spotted owl habitat comes on line.²⁹⁹

A “hybrid” reserve strategy for more frequent fire forests also has merit.³⁰⁰ Under this approach, a mapping exercise would identify currently suitable spotted owl habitat and designate these denser forest stands as reserves, with particular attention paid to identifying and reserving

III-29 – III-31. However, the extent and duration of post-fire habitat use is limited, and the lack of complex late-successional forest habitat after high severity wildfire is a limiting factor to persistent spotted owl use of burned forests. *See* Jones, et al., *Megafire causes persistent loss of an old-forest species*, ANIMAL CONSERVATION (April 2021).

²⁹⁷ SYNTHESIS OF SCIENCE, *supra* note 11, at 38-40. Although all forests in the Pacific Northwest evolved with fire as the major natural disturbance process, forests in the southern part of the spotted owl's range – roughly from Roseburg, Oregon south to Marin, California – are particularly well-adapted to frequent and mixed-fire regimes. *Id.* at 38-40. Forests in the central and northern parts of the owl's range experience less routine fire, but when they do experience wildfire, it is often large, stand-replacing wildfires like that which occurred during the 2020 Labor Day fires in Oregon. *Id.* As the climate continues to warm, experts predict that there will be more wildfire in more places than in the past. *Id.* Moreover, because more human development is now located in the unfortunately named wildland-urban “interface” – the junction between the forest and the human-built environment – than in the past, communities will be more exposed to wildfire and its destructive power, further compelling urgent action. United States Forest Service, *Areas where homes, forests mix increased rapidly over two decades* (May 19, 2019), <https://www.nrs.fs.fed.us/news/release/wui-increase>.

²⁹⁸ NSO RECOVERY PLAN, *supra* note 292, at III-20 – III-41.

²⁹⁹ Jerry F. Franklin & K. Norman Johnson, *A Restoration Framework for Federal Forests in the Pacific Northwest*, 110 J. FORESTRY 429, 435 (Dec. 2012).

³⁰⁰ JERRY FRANKLIN, NORM JOHNSON & GORDIE REEVES, *THE NORTHWEST FOREST PLAN – A HISTORY* (Oregon St. U. Press, forthcoming).

areas that are most likely to escape wildfire in the near term (that is, “fire refugia”).³⁰¹ The unreserved acreage that does not currently possess suitable habitat characteristics would be scheduled for restoration treatments, including prescribed fire, that result in the retention of a density of larger older trees and other biological legacies that are likely to persist in the face of a warming climate.³⁰² As reserved areas experience wildfire over time, and as unreserved lands are restored to a future range of variability, unreserved lands would be newly designated as reserves and fire-affected reserves would be returned to an unreserved status and managed for ecological integrity.³⁰³

In other landscapes, such as the Willamette Valley, Oregon Coast Range, southwest Washington, Olympic Peninsula, and North Cascades, a more static reserve system may still be appropriate to anchor the NFP’s regional ecosystem framework and provide large blocks of intact interior forest.³⁰⁴ In these locations, an ecological forestry management regime³⁰⁵ focused on terrestrial and aquatic restoration and ecological integrity should be the dominant emphasis.³⁰⁶

b. Wildfire

As wildfire becomes an even greater disturbance agent on the landscape, robust direction concerning the management of post-fire NFP forests will be essential. Unlogged forests affected by wildfire are one of the rarest ecotypes in the Pacific Northwest,³⁰⁷ providing widespread wildlife

³⁰¹ *Id.*

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ Spies et al., *supra* note 127.

³⁰⁵ See JERRY F. FRANKLIN, K. NORMAN JOHNSON & DEBRA L. JOHNSON, *ECOLOGICAL FOREST MANAGEMENT* (2018). Principles for “wet” and “dry” forest management from the 2011 spotted owl recovery plan are consistent with an ecological forestry approach to land management. See NSO RECOVERY PLAN, *supra* note 292, at III-11 – III-41.

³⁰⁶ See Brown, *supra* note 254.

³⁰⁷ DAVID B. LINDENMAYER, PHILIP J. BURTON & JERRY F. FRANKLIN, *SALVAGE LOGGING AND ITS ECOLOGICAL CONSEQUENCES* 17-44 (2008).

benefits.³⁰⁸ On the other hand, post-fire logging can have serious deleterious effects on water quality, soil health, wildlife, future wildfire risk, and forest succession.³⁰⁹ The existing NFP recognizes that logging after natural disturbance, particularly after wildfires, is of limited ecological necessity, and therefore restricts the practice to rare circumstances within late-successional reserves.³¹⁰ But the existing plan provides no management direction regarding post-disturbance logging in its other land use allocations.

Since promulgation of the NFP in 1994, the scientific literature has become quite definitive that complex early seral habitat created by natural disturbance is quite valuable ecologically, and therefore warrants protection.³¹¹ Consequently, a revised NFP should extend the current management direction applicable to LSRs to the entire landscape, explicitly requiring retention of large, old trees post-fire.³¹² Updated management directives to this effect would be consistent with the 2011 northern spotted owl recovery plan that expressly directs land managers in the post-fire environment to conserve and restore “habitat elements that take a long time to develop (*e.g.*, large trees, medium and large snags, downed wood).”³¹³

c. Wildlife

Two additional wildlife recommendations bear noting. First, while retaining all suitable northern spotted owl habitat is essential to the conservation and recovery of the species,³¹⁴ owl

³⁰⁸ *Id.*

³⁰⁹ *Id.*

³¹⁰ NFP STANDARDS AND GUIDELINES, *supra* note 118, at C-13 – C-16.

³¹¹ LINDENMAYER et al., *supra* note 301, at 17-44, 130-133.

³¹² Since the best available science indicates that there is little ecological need to intervene in the post-fire environment other than to protect public health and safety along roads and other public infrastructure, only limited exceptions to a prohibition on post-fire management would be appropriate.

³¹³ NSO RECOVERY PLAN, *supra* note 292, at III-47 – III-49 (Recovery Action 12)

³¹⁴ Memorandum from State Supervisor, Oregon Fish and Wildlife Office, to Acting Assistant Regional Director, Ecological Services, Interior Regions 9/12, Portland, Oregon, 1-2, 4 (Jan. 15, 2021) (hereinafter FWS 2021b); NSO RECOVERY PLAN, *supra* note 292, at III-43, III-45.

researchers unequivocally now recognize that aggressive control of the invasive barred owl – a superior competitor to the spotted owl – is required if the iconic native species is to continue to exist.³¹⁵ In 2013, FWS began implementation of an experimental lethal control program for barred owls running through 2021.³¹⁶ Results from the experimental program indicate that removing barred owls, in combination with conservation of suitable habitat, can slow or reverse the rate of spotted owl population declines.³¹⁷ Thus, the revised NFP should establish a permanent control program and, similar to the BLM’s approach in its 2016 RMPs, only authorize timber harvest that does not result in incidental take of spotted owls until population numbers stabilize.³¹⁸

Second, although much of the focus of the plan has been on northern spotted owls, the forest biota addressed in the plan’s S&M program warrants continued conservation attention in a revised NFP. The 2012 planning rule takes a course-filter/fine-filter approach³¹⁹ to sensitive

³¹⁵ *Id.* at 2-4; A.B. Franklin, et al. *Range-wide declines of northern spotted owl populations in the Pacific Northwest: A meta-analysis*, 259 *BIO. CONSERV.* (July 2021) (finding a sharp rangewide decline in spotted owl populations).

³¹⁶ FWS, *Barred Owl Study Update* (July 9, 2021), <https://www.fws.gov/oregonfwo/articles.cfm?id=149489616>.

³¹⁷ J.D. Wiens, et al., *Effects of barred owl (*Strix varia*) removal on population demography of northern spotted owls (*Strix occidentalis caurina*) in Washington and Oregon—2019 annual report*: U.S. Geological Survey Open-File Report 1089 (2020), <https://doi.org/10.3133/ofr20201089>; J. David Wiens et al., *Invader removal triggers competitive release in a threatened avian predator*, 118 *PROC. OF NAT’L ACADEMY OF SCIENCES* 31 (2021).

³¹⁸ Since control of barred owls across the range of the northern spotted owl is time-consuming and expensive, managers should identify priority areas for barred owl removal and focus first on removal in spotted owl source populations and other critical linkages for the species (e.g., southwest Oregon).

³¹⁹ See 36 C.F.R. §§ 219.9(a), (b). The regulation explains that “Compliance with the [course-filter] ecosystem requirements...is intended to provide the ecological conditions to both maintain the diversity of plant and animal communities and support the persistence of most native species in the plan area. Compliance with the [fine-filter] requirements...is intended to provide for additional ecological conditions not otherwise provided by compliance with [the course-filter requirements] for individual species as set forth in [the fine-filter requirements].” *Id.* § 219.9. The course-filter requirements generally consist of land use allocations and plan components applicable across the landscape, whereas fine-filter components are tailored to individual species whose ecological needs are not met by the general course filter provisions: “If the responsible official determines that the [other] 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.” *Id.* § 219.9(b)(1).

wildlife protection by requiring the designation and management of “Species of Conservation Concern” (SCC),³²⁰ a concept arguably pioneered by the NFP’s adaptive S&M program. SCC are species other than ESA-listed, proposed, or candidate species in the plan area that the regional forester has determined, on the basis of best available science, that there exists “a substantial concern” about their capability to persist over the long-term in the planning area.³²¹ Although regional foresters have yet to designate SCC for the NFP revision, these species are likely to mirror the types of wildlife addressed by the plan’s S&M program. Although the 2012 planning rule does not require surveys for or buffers around SCC – as does the plan for S &M species – protection of mature and old-growth trees and forests across the landscape would largely obviate the need for laborious species-specific management. To ensure against a decline in abundance or diversity of SCC, plan monitoring and adaptive management, required by the 2012 planning rule,³²² is essential.

2. The Continuing Importance of the Aquatic Conservation Strategy

Critics of the NFP often cite the plan’s failure to provide the alleged “promised” 1.2 billion board feet of timber,³²³ but one aspect of the plan that indisputably has been a resounding success is the ACS and its associated watershed management framework.³²⁴ Monitoring of plan implementation has confirmed that “the fundamental tenets and ecological framework of the [ACS] are sound,” and “that aquatic and riparian ecosystems in the [NFP] area are improving as

³²⁰ 36 C.F.R. § 219.9(c).

³²¹ See generally NFP STANDARDS & GUIDELINES, *supra* note 118, at C-4 – C-6.

³²² 36 C.F.R. § 219.12.

³²³ American Forest Resources Council, *The Northwest Forest Plan* (July 9, 2021) <https://amforest.org/the-northwest-forest-plan/>. The plan never actually made this “promise.” See *supra* notes 126-27 and accompanying text.

³²⁴ SYNTHESIS OF SCIENCE, *supra* note 11, at 93-106.

expected, albeit slowly.”³²⁵ There is little scientific evidence suggesting that the ACS should be altered,³²⁶ although the effects of a warming climate may prompt augmented protections.³²⁷

For example, the NFP has designated 164 key watersheds over nine million acres to protect high quality water sources and salmon habitat.³²⁸ Additional key watershed designations and stronger environmental safeguards may be needed to buffer against projected climate change effects (like drought and floods) and rapid human population growth, including providing thermal refuges for aquatic wildlife, establishing climate adaptation and restoration goals, and imposing restrictions on logging, road building, and other stressors. Although the NFP made good progress reducing the extent and adverse effects of roads,³²⁹ climate change’s adverse effects on water quality and species will likely warrant greater watershed restoration and protections.³³⁰

3. Climate Change

A revised NFP must address the existential threat of global climate change. The Pacific Northwest’s older, high-biomass forests are globally significant carbon sinks.³³¹ In recent years, the scientific community has made great strides in understanding the potential effects of climate change, management changes necessary to minimize those effects, and the critical role that high-biomass forests play in this process.³³² Providing long-term carbon storage through the protection

³²⁵ *Id.* at 93. Still, a number of wild salmonid and steelhead runs have been listed during the past 20 years.

³²⁶ *Id.* at 94-95, 106.

³²⁷ *Id.* at 98-100, 104.

³²⁸ NFP STANDARDS & GUIDELINES, *supra* note 118, at A-5.

³²⁹ SYNTHESIS OF SCIENCE, *supra* note 11, at 506-510; *see also* Olga N. Krankina, Mark E. Harmon, Frank Schneckengerber & Carlos A. Sierra, *Carbon balance on federal forest lands of Western Oregon and Washington: The impact of the Northwest Forest Plan*, 286 FOREST ECOLOGY AND MGMT. 171 (2012); James R. Strittholt, Dominick A. Dellasala & Hong Jiang, *Status of Mature and Old-Growth Forests in the Pacific Northwest*, 20 CONS. BIO. 2, 363 (2006); Olga N. Krankina, Dominick A. DellaSala, Jessica Leonard, and Mikhail Yatskov, *High-Biomass Forests of the Pacific Northwest: Who Manages Them and How Much is Protected?*, ENVTL MGMT (June 2014).]

³³⁰ *Id.*

³³¹ *Id.* at 24-25.

³³² *Id.* at 13-28.

of mature and old-growth forests can buffer against climate change and provide the United States with a means of complying with the international climate change agreements on forest carbon sinks and reservoirs,³³³ consistent with the Biden administration’s professed focus on climate action.³³⁴

4. Tribal Co-Management

The Pacific Northwest is home to numerous federally recognized and unrecognized Tribes and Indigenous people who have actively managed what are now national forests for millennia. As the Science Synthesis explains, “the ecosystems within the NWFP area support an array of resources used by tribes for food, medicine, and materials. These resources also support sacred sites, tribal sense of place, and cultural identity;”³³⁵ however, “when written, the Plan itself did not consider tribal management practices or explicitly seek to promote many resources valued by tribes.”³³⁶ Consequently, plan revision will provide a long-overdue opportunity to reevaluate the role of tribal co-management of national forestlands.

“Co-management” can have many connotations, but generally involves the following parameters: (1) recognizing tribes as sovereign governments; (2) proceeding consistent with the federal government’s trust responsibilities to tribes; (3) providing structures for tribal involvement; (4) meaningfully integrating tribes early and often in the decision-making process; (5)

³³³ *Id.* at 24-25. Not all forests within the range of the northern spotted owl are equally as well-suited to absorb and sequester forest carbon over time: forests with a more frequent (fire) disturbance regime, such as those in the southern part of the range, are unlikely to store carbon for long periods of time. Mesic forests, with much longer disturbance horizons, may be better suited to function as carbon refugia. *Id.* at 24-27. Thus, plan content pertaining to carbon sequestration or climate refugia should take into consideration the tradeoffs inherent in management of a dynamic system. *Id.*

³³⁴ Proclamation No. 13990, 86 Fed. Reg. 7,037, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis* (Jan. 27, 2021); Proclamation No. 14008, 86 Fed. Reg. 7,619, *Tackling the Climate Crisis at Home and Abroad* (Jan. 27, 2021).

³³⁵ SYNTHESIS OF SCIENCE, *supra* note 11, at 157.

³³⁶ *Id.*

incorporation of tribal expertise in decision making; and (6) supplying dispute resolution mechanisms.³³⁷ Although the Forest Service and other federal land managers rarely use the phrase “co-management,” the concept is similar to cooperative federalism frameworks that appear in many federal land management statutes,³³⁸ prompting experts to recommend that “the principles and strategies employed in cooperative federalism should be extended to Indian tribes and modified to affirm tribal sovereignty and safeguard the cultural resources and reserved treaty rights found on federal public lands.”³³⁹ Indeed, in 2020 Montana Senator Jon Tester (D-Mont.) introduced S. 4288, *The Badger-Two Medicine Protection Act*, which embraces co-management principles that “emanates from Blackfeet [Tribal] values and vision for the area”³⁴⁰ and “demonstrates a form of carefully crafted, innovative shared governance that could enable tribal co-management in the future.”³⁴¹

³³⁷ Monte Mills & Martin Nie, *Bridges to a New Era; A Report on the Past, Present, and Potential Future of Tribal CoManagement on Federal Public Lands*, iii-iv (Missoula, MT: Margery Hunter Brown Indian Law Clinic/Bolle Center for People and Forests, University of Montana, 2020).

³³⁸ *Id.* at 78-81. For example, section 6(a) of NFMA requires its land plans to be “coordinated with land and resource management planning process of State and local governments and other Federal agencies. 16 U.S.C. s. 1604 (a). Section 202(c)(9) of FLPMA requires its land plans to be “consistent with State and local plans to the maximum extent [the Secretary] finds consistent with Federal law and the purposes of [FLPMA]. 42 U.S.C. s. 1712(c)(9). And section 302(b) of FLPMA also expressly preserves state authority to manage fish and resident wildlife on both Forest Service and BLM lands. *Id.* s. 1732(B).

³³⁹ *Id.* at 81-82.

³⁴⁰ *Id.* at 88. In a press statement accompanying the introduction of S. 4288, Timothy Davis, Chairman of the Blackfeet Tribal Business Council, explained that “The Blackfeet Nation has maintained a profound connection to the Badger-Two Medicine since time immemorial...It is our last cultural refuge, home to many of our origin stories, a stronghold for our ceremonies and traditions, and until it is permanently protected, we cannot rest. This bill ensures the teaching of our Pikuni ancestors will be fulfilled and we can always be connected with the sacred. We are extremely grateful to Senator Tester for his support and leadership in our effort to protect these sacred lands.” Sen. Jon Tester, *Tester Introduces Legislation to Permanently Protect Badger-Two Medicine: Senator’s bill, backed by Blackfeet Tribe, designates 127,000 acres as the Badger-Two Medicine Cultural Heritage Area* (July 22, 2020), available at https://www.testersenate.gov/?p=press_release&id=7597; see also, Cassidy Randall, HIGH COUNTRY NEWS, *New bill would permanently protect 130,000 acres of Montana’s Badger-Two Medicine* (Aug. 5, 2020).

³⁴¹ Mills & Nie, *supra* note 336, at 88.

There is, however, no need to wait for the uncertain federal legislative process to embrace co-management.³⁴² Commentators have often suggested the use of the forest planning process to recognize and protect tribal cultural and natural resource interests,³⁴³ and the Forest Service has acknowledged that “strategies to promote tribal ecocultural resources are consistent with emerging directions in forest management, including reestablishing more natural disturbance regimes and landscape heterogeneity using adaptive management and restoration forestry. Such strategies can be integrated with measures to protect large, old trees, cultural sites, and other ecocultural resources that are potentially sensitive to treatments and vulnerable to severe disturbances.”³⁴⁴ An assessment of tribal interests within or nearby NFP lands must be a priority for those revising the NFP. The plan should identify and designate areas and management prescriptions (such as the use of prescribed fire to propagate huckleberry fields), and explore tribal management of designated areas.³⁴⁵

5. The Role of the Oregon and California Lands

A revised NFP must also address the O&C lands managed by BLM. In 2016, BLM revised its land plans within the spotted owl’s range and effectively withdrew them from the plan.³⁴⁶ Environmentalists, the timber industry, and the O&C counties all challenged the revised plans. As explained in section VI, the Oregon federal district court eventually upheld the BLM plan revisions against an environmentalist challenge, and the Ninth Circuit affirmed.³⁴⁷ The Biden administration

³⁴² *Id.* at 84-85.

³⁴³ See e.g., Martin Nie, *The Use of Co-Management and Protected Land-Use Designations to Protect Tribal Cultural Resources and Reserved Treaty Rights on Federal Lands*, 48 NAT. RES. J. 585 (Summer 2008).

³⁴⁴ SYNTHESIS OF SCIENCE, *supra* note 11, at 161.

³⁴⁵ *Id.* at 163.

³⁴⁶ See *supra* notes 110, 224-244 and accompanying text.

³⁴⁷ *Pac. Rivers v. U.S. Bureau of Land Mgmt.*, 2019 WL 1232835 (D. Or. Mar. 15, 2019), *aff’d sub nom. Rivers v. Bureau of Land Mgmt.*, 815 F. App’x 107 (9th Cir. 2020); See *supra* notes 224-241 and accompanying text.

could attempt to reintegrate the lands into the NFP but would need to rationally explain why rejoining the plan is warranted, when only a short time ago BLM thought the O&C lands should not be part of the NFP.³⁴⁸

A bigger problem for the integrity of the NFP – revised or not – is the District of Columbia district court’s decision construing the OCLA to require harvests of more than 237 million board feet of timber annually.³⁴⁹ Judge Leon’s opinion was based on a questionable interpretation of an eight-decade-old statute (a classic “lord of yesterday”³⁵⁰) adopted by no other court³⁵¹ and an

³⁴⁸ A reasoned explanation that should survive judicial review would explain that the 2016 revised plans lacked a reasoned basis, or at least lacked an explanation of the environmental costs of removing the BLM plans from the NFP. There was certainly no attempt to explain how the removal was consistent with the policies of the NFP. There was no science supporting the removal; in fact, all the science of the last quarter-century suggests that intact forests, especially old-growth forests, are much more economically and ecologically valuable as carbon sinks or biodiversity habitat than being commercially logged. Although the federal land management agencies have a clear roadmap to follow in revising their rules, they have some experience learned the hard way. *See, e.g., Organized Vill. of Kake v. U.S. Dep’t of Agric.*, 795 F.3d 956, 966–67 (9th Cir. 2015) (striking down the Forest Service’s repeal, after reinstatement, after repeal, and after promulgation of the agency’s Roadless Rule) (“a policy change complies with the APA if the agency (1) displays “awareness that it is changing position,” (2) shows that “the new policy is permissible under the statute,” (3) “believes” the new policy is better, and (4) provides “good reasons” for the new policy, which, if the “new policy rests upon factual findings that contradict those which underlay its prior policy,” must include “a reasoned explanation ... for disregarding facts and circumstances that underlay or were engendered by the prior policy”); *see also Nw. Ecosystem All. v. Rey*, 380 F. Supp. 2d 1175, 1192-93 (W.D. Wash. 2005).

³⁴⁹ *Am. Forest Res. Council v. Hammond*, 422 F.Supp. 3d 184, 189–91 (D.D.C. 2019), *appeal filed sub nom. Am. Forest Res. Council v. United States*, 20-5008 (D.C. Cir. Jan. 24, 2020); *see also supra* notes 242-244 and accompanying text.

³⁵⁰ *See WILKINSON, supra* note 52, at xiii (explaining that much of our natural resources are governed by the “lords of yesterday,” which are “laws, policies, and ideas, not people” that arose for good reason at the time of their conception, but that “simply do not square with the economic trends, scientific knowledge, and social values in the modern West”).

³⁵¹ *AFRC v. Hammond*, 422 F.Supp. at 189-91 (interpreting the OCLA to require more than an allowable sale quantity of 205 mmbf annually). It is true that the Ninth Circuit in *Headwaters v. BLM*, 914 F.2d 1176, 1183 (9th Cir. 1990), classified the OCLA as a dominant use statute, in contrast with the multiple use paradigm of other statutes like FLPMA, due to uncodified savings clause in FLMPA instructing that the OCLA was to prevail over FLPMA’s provisions in cases of conflicts, Pub. L. No. 94-579, 90 Stat. 2786, § 701. But the *Headwaters* court did not require any specific level of harvests. And since the savings clause extended only to FLMPA’s provisions, the Ninth Circuit was able to quickly clarify that the OCLA did not required harvests of 500 bbf annually and did not exempt BLM from complying with other environmental law like NEPA and the ESA. *Portland Audubon Soc. v. Babbitt*, 998 F.2d 705, 709 (9th Cir. 1993, *aff’g* 795 F.Supp. 1489, 1505-07 (D. Or. 1992)). Thus, whatever “dominant use” means under the OCLA, it must comply with environmental restrictions imposed by laws other than FLPMA.

analysis of the effect of sustained yield harvesting that is open to serious question.³⁵² If affirmed on appeal,³⁵³ the result would not only put the wildlife and waters in the region at risk but also make it impossible for BLM to rejoin the ecosystem-based NFP.

Both scientists and the courts have long made clear the importance of the O&C lands as an essential component in the effort to forestall the extinction of the northern spotted owl,³⁵⁴ a

See Michael C. Blumm & Jonathan Lovvorn, *The Proposed Transfer of BLM Timber Lands to the State of Oregon: Environmental and Economic Questions*, 32 LAND & WATER L. REV. 353, 366-77 (1997) (examining *Headwaters*, *Portland Audubon*, and related cases). See *supra* notes 245-50 and accompanying text (discussing *AFRC v. Nedd*).

³⁵² According to Judge Leon's interpretation of "sustained yield," the provision in the OCLA—unlike similar provisions in statutes like FLMPA and NFMA—requires harvests of greater than 205 mmbf annually, a conclusion in conflict with *Portland Audubon*, as discussed *supra* note 345. Leon's conception of sustained yield management as imposing a minimum harvest requirement that is not subject to lands withdrawn from harvests for species considerations (or, for that matter, presidential withdrawals for national monuments) is unprecedented, elevating an abstract definition of sustained yield—and a contested one at that—over the context of on-the-ground land management considerations. It also fails to show sufficient deference to BLM's expertise to calculate the sustained yield from the O&C lands. See *Lands Council v. McNair*, 629 F.3d 1070, 1074 (9th Cir. 2010).

³⁵³ Although Judge Leon handed down his decision on relief in November 2021, see *supra* notes 245-50 and accompanying text, he issued a partial vacatur of the plans at issue but stayed his order, raising questions about its immediate appealability. See *supra* text accompanying note

³⁵⁴ *Portland Audubon Soc. v. Lujan*, 712 F. Supp. 1456, 1469 (D. Or.), *aff'd in part, rev'd in part*, 884 F.2d 1233 (9th Cir. 1989) ("the Bureau of Land Management will also have a particularly vital role to play. Indeed, the completion of the habitat network critical to sustaining a proper distribution of the owls is heavily dependent on BLM lands in Oregon") (quoting from a blue-ribbon panel report on the need for BLM participation in spotted owl and habitat management); *id.* at 1479-80 ("Because of BLM's checkerboard land ownership pattern, it was recognized by BLM biologists in the late 1970's that to have some degree of a functioning ecosystem management strategy (that included old-growth forest habitat) on the O&C forest lands in western Oregon would require some type of corridor or linking of blocks of older forest habitat...At this time BLM recognized that self-sustaining populations of northern spotted owls could not be maintained exclusively on BLM lands, however, that these lands had a vital role in the maintenance of spotted owls in western Oregon, especially in the Coast Range Mountains...Without these crucial linkages or connectors of older forest blocks or spotted owl habitat sites, the owls located in the Coast Range could be relegated to a series of isolated populations"); *Portland Audubon Soc. v. Lujan*, 795 F. Supp. 1489, 1494 (D. Or. 1992), *modified*, No. CIV. 87-1160-FR, 1992 WL 176353 (D. Or. July 16, 1992), *aff'd sub nom. Portland Audubon Soc. v. Babbitt*, 998 F.2d 705 (9th Cir. 1993) ("In May of 1990, the Interagency Scientific Committee issued its Final Report, in which it concluded that the lack of consistent planning strategy has resulted in a high risk of extinction for the northern spotted owl subspecies") (observing that the Interagency Scientific Committee concluded that the lack of a coordinated management plan implemented by both the Forest Service and BLM for the owl and its habitat risked the species' extinction); *Seattle Audubon Soc. v. Moseley*, 798 F. Supp. 1473, 1479-80 (W.D. Wash.), *supplemented*, 798 F. Supp. 1484 (W.D. Wash. 1992), *aff'd sub nom. Seattle Audubon Soc. v. Espy*, 998 F.2d 699 (9th Cir. 1993), *aff'd in part, appeal dismissed in part sub nom. Seattle Audubon Soc. v. Espy*, 998 F.2d 699 (9th Cir. 1993) (invalidating the Forest Service's northern spotted owl

conclusion more salient today than at the time of the adoption of the NFP over a quarter-century ago. Removing the O&C lands from the scope of the NFP is ecologically, if not legally, arbitrary. We presume that the Biden administration will see the necessity of maintaining BLM forest lands as an integral part of a revised NFP. As of this writing, however, the Administration had yet to take any action regarding the current and future management of the O&C lands.

Conclusion

The Northwest Forest Plan—initially an emergency measure aimed at rescuing the northern spotted owl from industrial logging of old-growth forests, while also resuming logging that had been enjoined by the courts—has survived over a quarter-century despite determined efforts to amend or replace it. That fact might be its chief achievement: it still exists. But despite its longevity, the plan’s future remains quite unclear. Half of the political administrations charged with implementing the plan tried to end or undermine it. The NFP survived only because federal courts enjoined repeated efforts to undermine it by the Bush Administration, which parroted opposition to the plan by the timber industry and the local counties.³⁵⁵

The plan’s ecosystem approach to Northwest federal forest management is now under existential threat from the federal district court in the District of Columbia, which responded to efforts to free O&C lands from the NFP by interpreting the eighty-year old OCLA³⁵⁶ to require timber harvest levels expressly rejected by other courts as ecologically and legally unsustainable.³⁵⁷ Through it all, Congress has remained largely silent, apparently content to let the

conservation strategy for lack of BLM participation); *id.* at 1481–82 (quoting with approval expert conclusion regarding value and importance of BLM lands).

³⁵⁵ See *supra* Section V (discussing the case law).

³⁵⁶ See *supra* note 344 and accompanying text (defining the “Lords of Yesterday”).

³⁵⁷ See *supra* notes 242–44 and accompanying text (discussing *Am. Forest Res. Council v. Hammond*, 422 F.Supp. 3d 184, 189–91 (D.D.C. 2019), *appeal filed sub nom. Am. Forest Res. Council v. United States*, 20-5008 (D.C. Cir. Jan. 24, 2020)).

largest ecosystem management program in the world exist without congressional leadership or sponsorship. The status of the O&C lands and their potential exit from the NFP has thus far received the same congressional acquiescence as the NFP has for virtually its entire life. The upshot is the Biden administration has a relatively free hand in administratively revising the plan, subject, of course, to judicial review.

Courts, especially the Ninth Circuit, have been instrumental in preserving the existence of the NFP. They have upheld pertinent ESA listings, affirmed the plan itself, rejected less ambitious recovery goals for listed species, and invalidated project-level post-fire salvage and other logging proposals. The timber industry responded to these setbacks by wielding its influence to obtain congressional appropriation riders and by choosing a more favorable non-western judicial forum that has produced what might be considered unlikely victories in the D.C. District Court.³⁵⁸ Some of these decisions directly conflicted with courts in the Ninth Circuit and have yet to survive appellate review in the D.C. Circuit.³⁵⁹

The story of the persistence of the plan is also in large measure a story about science versus socioeconomics and long-standing environmental politics. The science is relatively clear: the importance of intact forests in a climate-changed world is not in doubt and has only grown stronger in the quarter century since the NFP's adoption.³⁶⁰ The science has so far proved more persuasive

³⁵⁸ See *supra* notes 242-44 and accompanying text.

³⁵⁹ See *supra* notes 242-44 and accompanying text (discussing *Am. Forest Res. Council v. Hammond*, 422 F.Supp. 3d 184, 189–91 (D.D.C. 2019), *appeal filed sub nom. Am. Forest Res. Council v. United States*, 20-5008 (D.C. Cir. Jan. 24, 2020)). The industry and counties persuaded the D.C. district court to give no comity to these prior decisions; presumably, that decision will be an issue on appeal.

³⁶⁰ See, e.g., *Forests and climate change*, IUCN ISSUES BRIEF (Feb. 2021) <https://www.iucn.org/resources/issues-briefs/forests-and-climate-change>; see also *supra* notes 270, 325-327 and accompanying text (discussing the importance of mature forests to mitigating the effects of climate change).

to the courts than the politics and projected regional socioeconomic collapse, which largely failed to materialize.³⁶¹

Given the importance of making land management decisions based on the best available science, and the fact that the courts have generally – but only to a point – afforded managers deference in the interpretation and implementation of that science,³⁶² a strong scientific foundation for a revised NFP is essential. To that end, the revision must include an expanded prohibition on post-fire logging, subject to narrow exceptions, such as for public safety or for ecosystem purposes.³⁶³ This salvage logging prohibition, and directives to restore degraded lands and manage these and other lands for ecological integrity, would be implemented according to “just-transition” policies, providing jobs-in-the-woods and other economic development assistance to help transition northwest forests and nearby communities into the high-wildfire world that lies ahead.³⁶⁴ Ecological transitions can be ameliorated in ways that market transitions have not. A smooth ecological transition, under just-transition principles, is imperative in light of the important role the NFP can play in fulfilling international obligations as a carbon sink.³⁶⁵

An underappreciated achievement of the NFP is the ACS, which has long held the possibility of revolutionizing watershed management and therefore should be carried forward in the revision effort.³⁶⁶ Decades after its inception, ongoing monitoring efforts demonstrate that the

³⁶¹ See, e.g., *supra* note 73 (citing Judge Dwyer’s proclamation that the “mightiest economy on Earth” can afford to protect the last of its remaining old-growth).

³⁶² *Lands Council v. McNair*, 629 F.3d 1070, 1074 (9th Cir. 2010).

³⁶³ See *supra* notes 301-307 and accompanying text.

³⁶⁴ See *supra* notes 262-269 and accompanying text.

³⁶⁵ See *supra* note 323 and accompanying text.

³⁶⁶ See *supra* notes 318-321 and accompanying text (discussing the ACS). If ACS principles were incorporated into the revised NEPA regulations, the result would give waterways protection that does not exist outside the confines of the Wild and Scenic Rivers Act. See, e.g., Michael C. Blumm & Max M. Yoklic, *The Wild and Scenic River Act at 50: Overlooked Watershed Protection*, 9 Mich. J. Env’tl. & Admin. L. 1, 42-51 (2019) (discussing comprehensive river management plans).

scientific basis of the ACS is sound and conditions in aquatic and riparian ecosystems in the NFP area are improving as FEMAT expected, contributing to the delisting of endangered fish.³⁶⁷

The issue of fixed versus flexible reserve boundaries is worthy of consideration. We recognize this as a challenging and divisive issue, and one that will require managers, scientists, and stakeholders to consider the forest in new ways, not as fixed “zones” created and managed disparately. Drawing lines on a map, as decision makers have done in the past—essentially partitioning the land into either/or buckets of “manage this” and “don’t manage that”—disregards the reality of modern forest management in a climate-constrained world. Although many stakeholders prefer define reserved and non-reserved land use allocations, lines on a map may not be the best way to achieve objectives like restoring degraded landscapes, protecting relatively intact areas, and managing landscapes for ecological integrity that serves multiple uses.

The NFP is the most ambitious ecosystem plan the world has ever seen. Over almost three decades, it has pioneered landscape planning on a grand scale, nearly ended the industrial harvesting of old-growth trees, illustrated how to systematically protect and restore watersheds, and highlighted the essential role of monitoring and adaptive management to land management.³⁶⁸ In many ways, the NFP is the standard-bearer for landscape planning,³⁶⁹ a working example of

³⁶⁷ See *supra* notes 318-321 and accompanying text (discussing the ACS); see also SYNTHESIS OF SCIENCE, *supra* note 11, at 463 (“the Oregon chub was delisted in 2015 ... becoming the first fish to be delisted because of increases in numbers. Habitat on the Willamette National Forest contributed to its recovery”).

³⁶⁸ True, the plan has yet to achieve one of its principal goals—the recovery of the northern spotted owl—but there is no scientifically-justified alternative. Indeed, spotted owl researchers are clear that to recover the species, protection of all remaining suitable habitat and lethal control of the barred owl is required. J. David Weins et al., *Invader removal triggers competitive release in a threatened avian predator*, 118 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 31 (July 2021) (“Despite over 30 years of protection under the Federal Endangered Species Act, populations have continued to decline and, in some cases, those declines have accelerated...The study concluded that removal of barred owls, when coupled with conservation of suitable forest conditions, can slow or even reverse population declines of spotted owls”).

³⁶⁹ Landscape planning became a political football in the Obama administration when revising BLM’s land planning regulations. After a years-long effort, the promulgated regulations, 81 Fed. Reg. 89589 (Dec. 12,

ecosystem management on an extensive scale. Whether it survives another quarter-century is hardly assured: federal land management remains contentious and the ultimate political football, particularly in Pacific Northwest forests.

Whatever the future brings, we are reminded of George Santayana's admonition, "Those who cannot remember the past are condemned to repeat it."³⁷⁰ The NFP has taught society numerous social, economic, and ecological lessons, including how to resolve, albeit imperfectly, continuous and contentious land management conflicts. Many of those lessons remain as true today as they were in 1994 when the NFP was adopted, such as the central role of science in land management planning. Other lessons, such as those about climate change, natural disturbance, and species recovery, are only now beginning to become fully apparent. The fundamental framework of the NFP remains scientifically unimpeachable and has the potential to successfully guide federal forest management in the Anthropocene.³⁷¹ Undermining those principles to serve short-sighted commercial or political ends will only serve to reignite the "war in the woods," suggesting that we have learned nothing in the past quarter-century. We hope and believe that society will prove wiser than that.

2017) (to be codified at 43 C.F.R. s. 1600, were vetoed by the Republican Congress in 2017. Pub. L. No. 115-12 (March 27, 2017).

³⁷⁰ GEORGE SANTAYANA, *THE LIFE OF REASON* (1905).

³⁷¹ That is, the current geological age, the period during which human activity has been the dominant influence on climate and the environment.