

FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

LEAGUE OF WILDERNESS DEFENDERS-
BLUE MOUNTAINS BIODIVERSITY
PROJECT; CASCADIA WILDLANDS
PROJECT; SIERRA CLUB,
Plaintiffs-Appellees,

v.

JOHN P. ALLEN, in his official
capacity as Forest Supervisor of
the Deschutes National Forest;
UNITED STATES FOREST SERVICE, an
administrative agency of the
United States Department of
Agriculture,

Defendants-Appellants,
and

INTERFOR PACIFIC, INC.; AMERICAN
FOREST RESOURCE COUNCIL,

Defendant-Intervenors.

No. 09-35094
D.C. No.
6:07-cv-06283-HO
OPINION

Appeal from the United States District Court
for the District of Oregon
Michael R. Hogan, District Judge, Presiding

Argued and Submitted
March 3, 2010—Portland, Oregon

Filed August 13, 2010

Before: Richard A. Paez, Richard C. Tallman, and
Milan D. Smith, Jr., Circuit Judges.

Opinion by Judge Milan D. Smith, Jr.;
Dissent by Judge Paez

COUNSEL

Daniel Kruse (argued), Cascadia Wildlands Project; Christopher Winter and Ralph Bloemers, Crag Law Center; Attorneys for plaintiffs-appellees League of Wilderness Defenders-Blue Mountains Biodiversity Project, et al.

John C. Cruden, Acting Assistant Attorney General; E. Ann Peterson, David Glazer, and David C. Shilton (argued), Attorneys, U.S. Department of Justice, Environment & Natural Resources Division; and Jocelyn B. Somers, Office of the

General Counsel, U.S. Department of Agriculture (Of Counsel); Attorneys for defendants-appellants John P. Allen, et al.

Julie A. Weis and Scott W. Horngren (argued), Haglund Kelley Horngren Jones & Wilder, LLP, Attorneys for defendant-intervenors Interfor Pacific, Inc. and American Forest Resource Council.

OPINION

M. SMITH, Circuit Judge:

The League of Wilderness Defenders-Blue Mountains Biodiversity Project, Cascadia Wildlands Project, and the Sierra Club (collectively, the Conservation Groups, or Groups) brought suit against John Allen, Forest Supervisor of the Deschutes National Forest, and the U.S. Forest Service (collectively, the Forest Service), alleging that the Five Buttes Project (Project) violates the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA). The district court agreed, and granted summary judgment and an injunction in favor of the Conservation Groups. The Forest Service appeals.

We reverse, vacate the injunction, and remand with directions to the district court to grant summary judgment in favor of the Forest Service.

FACTS AND PRIOR PROCEEDINGS

1. The Northwest Forest Plan

The NFMA, 16 U.S.C. §§ 1600-1614, describes the statutory framework and requirements under which the Forest Service must manage National Forest System lands. The NFMA requires the Forest Service to develop a forest plan for each

unit of the forest system, *id.* § 1604(a), and all subsequent agency actions must be consistent with the governing plan, *id.* § 1604(i). As required by the NFMA, the Forest Service developed the Northwest Forest Plan (NWFP) to protect and enhance old-growth forest ecosystems in the Pacific Northwest and Northern California that serve as habitats for numerous species. *See Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*, Summary, April 13, 1994, available at <http://www.reo.gov/library/reports/newroda.pdf> (FS ROD). The endangered northern spotted owl (spotted owl) is an indicator species for the Deschutes National Forest, which lies within the NWFP area. As an indicator species, the spotted owl is a “bellwether . . . for the other species that have the same special habitat or population characteristics.” *Inland Empire Pub. Lands Council v. Schultz*, 88 F.3d 754, 762 n.11 (9th Cir. 1996).

2. The Davis Late Successional Reserve

In order to balance environmental and economic needs, the NWFP designates certain forest areas for logging and reserves other areas, called late successional reserves (LSRs), for conservation. Specifically, the NWFP created the Davis LSR 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 including the northern spotted owl.” Except as otherwise permitted by law, commercial logging activities are prohibited in LSRs.

Wildfire and other disturbances occur frequently within the Davis LSR. Most notably, in 2003, a major fire in the Davis LSR (the Davis fire) burned approximately 21,000 acres of forest, including 3,736 acres of spotted owl nesting, roosting, and foraging (NRF) habitat, approximately 16,000 of which suffered near complete tree mortality. In all, the Davis fire burned twenty-four percent of the Davis LSR. In response to the Davis fire, the Forest Service revised its Davis LSR

assessment to reflect the “immediate need” to “reduc[e] the risk of large-scale loss in a portion of the existing late and old-structure stands that are susceptible to insect attack and/or wildfire.” The objective of the Forest Service’s Project is to reduce that risk, in part, by thinning some of the trees in the Davis LSR. Objection to this logging component of the Project is the gravamen of the Conservation Groups’ complaint.

3. The Five Buttes Project

a. Purpose and Scope

The Forest Service is tasked with developing area-specific projects to fulfill the NWFP’s goals. The projects generally describe planned management and treatment activities in the relevant areas of the National Forest System lands. Treatment activities, or silviculture, include commercial thinning, regeneration cuts, salvage harvesting, and other activities intended to improve forest health.

The Project was designed in part to address the need identified in the updated Davis LSR assessment to reduce risks to the LSR from fire and disease. The Project covers approximately 160,000 acres (including the 48,900-acre Davis LSR) and authorizes management treatments, including commercial logging, across approximately 5,522 acres. It authorizes commercial logging in 618 acres of NRF habitat in the Davis LSR.¹

¹The Five Buttes Record of Decision clarifies that the commercial benefit that the sale of harvested timber will bring to the local economy is merely “attendant” to the primary goal of lessening “the risk that disturbance events . . . will lead to large-scale loss of forest.” *Five Buttes Record of Decision*, 9, 11, June 2007, available at <https://scholarsbank.uoregon.edu/xmlui/handle/1794/7069/> (Five Buttes ROD) (last visited July 30, 2010). Cf. *Siskiyou Reg’l Educ. Project v. Goodman*, 219 F. App’x 692, 695 (9th Cir. 2007) (“The fact that there may be some incidental economic benefit from the recovery project’s sale of burned trees is not contrary to and does not overshadow the NWFP’s primary goals of forest protection and restoration.”). If commercial logging was the sole purpose of the proj-

The Project's prescribed treatments differ depending on whether they are to occur within spotted owl habitat or home ranges. Within spotted owl home ranges, treatments would be "less intense or not done at all," while NRF habitat outside the home range would be treated depending on vegetation type and crown fire potential. The Project is structured so that no spotted owls will be directly harmed. Five Buttes Project Environmental Impact Statement 391 (EIS) ("There is no commercial thinning of NRF habitat proposed within an occupied spotted owl home range."). The stated goal of the Project is to accelerate the development of large trees and NRF habitat to promote the objectives of the Davis LSR.

b. Environmental Impact Statement and Record of Decision

As required by NEPA, 42 U.S.C. § 4321 *et seq.*, the Forest Service prepared a draft Environmental Impact Statement (EIS) for the Project that describes its expected environmental impacts. *Id.* § 4332(2)(C). The Forest Service circulated a draft EIS, received comments from the public, and eventually issued a final EIS and a record of decision (ROD). In creating the EIS, the Forest Service conducted computerized simulations to determine the effects of wildfires on the Project area under three different treatment scenarios (A, B, and C) and to evaluate what level of treatment, if any, was needed to protect and preserve the Davis LSR.

ect, we would agree with Judge Paez that the NWFP had been flouted. *See Seattle Audubon Soc'y v. Evans*, 771 F. Supp. 1081, 1096 (W.D. Wash. 1991) (granting an injunction against sale of *purely commercial* logging rights in spotted owl habitat because the Forest Service had acted under the mistaken belief that it did not have to comply with the NFMA at all). The district court in *Seattle Audubon Soc'y* distinguished that case as "not the usual situation in which the court reviews an administrative decision and, in doing so, gives deference to agency expertise." *Id.* at 1096. Here, on the other hand, the Forest Service's primary objective is preservation of the LSR, and it spent approximately three years doing the analysis necessary to comply with the NFMA.

Alternative A, or “No Action,” described the expected effects of fire and disease on the Project area if no additional thinning or fuels treatments are implemented. In other words, it modeled the effects of “allow[ing] current processes to continue, along with associated risks and benefits, in the [Project] area.”

Alternative B involved the most intensive treatments. It called for management activities across 5,522 acres and commercial harvesting of around 18.9 million board feet of lumber. This alternative proposed the greatest amount of commercial thinning within spotted owl NRF habitat (2,822 acres).

The Forest Service ultimately adopted Alternative C, which includes some treatments within the Davis LSR. Alternative C was developed to address landscape-scale fire prevention and retention of spotted owl habitat. It would “strategically place fuels treatments on the landscape to coordinate with past treatments to create and maintain fuel modifications around identified habitats.” This alternative calls for management of 7,798 acres and would harvest around 14.4 million board feet of lumber. It proposes commercial thinning on 2,023 acres of NRF habitat and would not involve treatment within any *occupied* spotted owl territory, but “habit modification would occur within unoccupied home ranges and could affect the ability of new owls to locate and establish a territory.” Under this alternative, “thinning would generally only remove trees less than 21 inches in diameter and less than 5 percent of all trees removed would exceed 21 inches in diameter.” Harvesting of trees larger than twenty-one inches “would only occur to meet basal area objectives or to lessen disease spread.”

The EIS states that Alternative C would reduce average burn probability by 40 percent over Alternative A, and that it “protects owl home ranges the best.” The Forest Service estimates that, if no preventative action is taken, the risk of large-scale loss of late-structure forest is extremely high, and the

risk of a Davis-like problem fire is moderate to high. EIS 84 (“Due to current fuel loadings . . . much of the landscape is classified as moderate to high risk of experiencing a Problem Fire similar to the Davis Fire.”); *see also* EIS 359 (describing the risk of large-scale loss of large trees and late structure forest as “extremely high”).² On appeal, the Conservation Groups contest this characterization, stating that “when the Forest Service considered all relevant factors, including ignition sources and location, it concluded that another large fire in the Five Buttes Project area was highly unlikely.” They cite the Ager study, *see infra* pages 11572-74, for evidence that “conditions for a large wildfire event are rare within the study area.”³

In response to public concerns regarding the long-term effects on spotted owl habitat, the Forest Service stated that “[b]ased on modeling, the return to NRF conditions will take 2-5 decades depending on the thinning intensity prescribed. . . . There is no commercial thinning of NRF habitat proposed

²The dissent misreads these two assessments as “inconsistent.” Dissent at 11593. The Forest Service’s assessment is more nuanced than the dissent cares to admit: the risk of a large-scale loss of late-structure forest is extremely high, and the risk of a wholly devastating Davis-like fire is moderate to high. There is no inconsistency. Regardless, as described below, the NWFP *does not require a specified level of risk* for logging to take place. Our colleague’s lengthy complaint about the syntax of risk is a distraction: the Forest Service determined, after extensive review and modeling, that the risk of disturbance was great enough to meet the three NWFP requirements for stand treatments. The question is whether that review and modeling met the APA’s extremely deferential standard; whether that risk is labeled “high” or “extremely high” is ultimately irrelevant and, as Judge Paez himself notes, “meaningless.” Dissent at 11592.

³As discussed more fully below, the Ager study was not conducted to assess the Project, *see infra* pages 11572-74, and was published after the administrative record was closed and the Forest Service had made its decision. Accordingly, we find the Ager study to be of little use in evaluating the risk of fire within the Project area, and of no use in determining what the Forest Service knew about that risk at the time the Forest Service made its decision.

within an occupied spotted owl home range; all other thinning within these areas would be small-diameter (3 inches or less) and stands would remain in NRF condition following activities.”

In response to comments opposing the harvest of larger trees, the Forest Service stated that the modeling had “determined that small-diameter thinning alone . . . in most places, would not change the vegetation and fuels structure enough to reduce fire risk,” and would not solve the problem of overcompetition among larger trees. Also, limited harvest of larger trees would only take place *outside* NRF habitat, so that these areas would remain in NRF condition.

The EIS also contains a table and description of past, present, and reasonably foreseeable future actions in an effort to analyze the cumulative impact of the Project. Additionally, cumulative impacts are discussed in detail throughout the EIS in relation to each affected area, type of vegetation, or animal. *See, e.g.*, EIS 66-70 (discussing the existing conditions of vegetation to create baseline); EIS 90 (discussing the cumulative effects of past fires and past and future fuels treatments); EIS 117 (discussing cumulative impacts on spotted owls).

On June 8, 2007, the Forest Supervisor for the Deschutes National Forest signed the ROD, which adopted Alternative C with minor modifications and incorporated the EIS analysis. The ROD incorporates and responds to public concerns, and outlines the Forest Service’s final decision on the Project. It also reports the results of the computerized simulations and explains the Forest Service’s decision to adopt Alternative C.

4. Independent Review and Approval by Outside Agencies

The NWFP requires the Regional Ecosystem Office (REO)⁴

⁴The REO provides staff and support to the Regional Interagency Executive Committee, which is “composed of Regional Directors from the var-

to review Forest Service projects to ensure consistency with the NWFP. Here, the REO concluded that Alternative C was consistent with the NWFP, stating that the “proposed treatment in the LSR meets the objectives for managing LSRs,” especially because “[t]reatments are placed on the landscape to alter fuel profiles in strategic locations such that it minimizes the likelihood of loss of valuable late- and old-structure habitat.” The REO also found that the proposed treatments “will result in a balanced mix of multi-story stands that are more . . . conducive to late-successional species, with single story stands that are more resilient and less susceptible to loss,” and that “[t]reatments will focus on retaining the late and old structure components that are both desirable for late-successional species and adapted to the local fire regimes.”

Although not required to do so, out of an abundance of caution, the Forest Service also requested formal review of the Project by the United States Fish and Wildlife Service (FWS). The FWS conducted an extensive empirical analysis and published an eighteen-page opinion stating that “the [Project] is not likely to jeopardize the continued existence of the spotted owl” because the NWFP “provides a well distributed set of reserves which protect suitable habitat across the range of the spotted owl,” and because “no suitable habitat will be removed within spotted owl home ranges or core areas.” It concluded that spotted owl “home ranges will be maintained through fire risk reduction and stand density treatments” and that the short-term loss of some spotted owl habitat was justified by the “long-term benefits to owl habitat across the landscape by reducing fuel loads, strategic placement of treatments that reduce the risk of [fires], and reducing tree

ious land management, regulatory, research, and other relevant agencies in the Federal government located [in the Northwest]” and “serves as the senior regional entity to assure the prompt, coordinated, and successful implementation of the [NWFP] at the regional level.” Regional Interagency Executive Committee, <http://www.reo.gov/riec/index.htm#who> (last visited July 28, 2010).

stocking densities to promote development of large trees in the future.”

5. Prior Proceedings

The Conservation Groups brought suit against the Forest Service, alleging that the Project calls for logging within the Davis LSR that does not comply with the NWFP. The Conservation Groups also claimed that the Forest Service’s EIS violates NEPA because the EIS does not adequately consider cumulative effects and does not respond to opposing views regarding logging and the prevention of catastrophic fires.

Regarding the NFMA challenge, the district court recognized that “[r]isk reduction activities are permitted in LSRs under limited circumstances.” However, in light of statements in the ROD recognizing possible negative effects on the LSR and spotted owls, the court found that “[t]he findings in the ROD are not strong enough to meet” the NWFP requirement that commercial thinning projects focused on older stands must “clearly result in greater assurance of long-term maintenance of habitat.”

With respect to the NEPA claim, the district court found that the cumulative impact discussion in the EIS was deficient for lack of detailed, quantitative information about past projects. *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. Weldon*, No. 07-6238-HO, 2008 WL 4279807, at *4 (D. Or. Sept. 11, 2008) (District Court Order) (“[T]hese [past] projects have not been quantified with time, place, and scale data.”). The court also found that the Forest Service’s use of an “aggregate effects” approach was “in contradiction to current Ninth Circuit law.” *Id.* at *5. The court declined to reach the Conservation Groups’ second NEPA claim regarding disclosure of opposing scientific opinions. *Id.*

The district court granted summary judgment in favor of the Conservation Groups, enjoined the Forest Service from

any additional logging, and remanded to the Forest Service for preparation of a new ROD that complies with the NFMA and NEPA.⁵ The Forest Service appeals the district court's final judgment.

STANDARDS OF REVIEW AND JURISDICTION

Under the Administrative Procedure Act (APA), a reviewing court can only reverse an agency decision if that decision was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). To address what had been a gradual divergence from this highly deferential standard by our court, we recently went en banc and unanimously held that:

Review under the arbitrary and capricious standard is narrow, and [we do] not substitute [our] judgment for that of the agency. Rather, we will reverse a decision as arbitrary and capricious only if the agency relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Lands Council v. McNair, 537 F.3d 981, 987 (9th Cir. 2008) (en banc) (internal quotation marks and citations omitted) (alterations in original). This deference is highest when reviewing an agency's technical analyses and judgments involving the evaluation of complex scientific data within the agency's technical expertise. *Id.* at 993.

⁵The district court permitted Interfor Pacific and American Forest Resource Council (collectively, Intervenors) to intervene in the remedial phase. The court granted Intervenors' motion to modify and limit the injunction to permit removal of remaining downed logs and other limited actions to protect the area. Intervenors are parties in this appeal.

For NEPA claims, “[w]e employ a rule of reason [standard] to determine whether the [EIS] contains a reasonably thorough discussion of the significant aspects of the probable environmental consequences.” *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1166 (9th Cir. 2003) (internal quotation marks omitted) (second alteration in original). We must ensure “that the agency has taken a ‘hard look’ at the environmental consequences of the proposed action,” *id.* (quoting *Churchill County v. Norton*, 276 F.3d 1060, 1072 (9th Cir. 2001)), and we must uphold the agency decision as long as the agency has “considered the relevant factors and articulated a rational connection between the facts found and the choice made,” *Selkirk Conservation Alliance v. Forsgren*, 336 F.3d 944, 953-54 (9th Cir. 2003) (quoting *Wash. Crab Producers, Inc. v. Mosbacher*, 924 F.2d 1438, 1441 (9th Cir. 1990)).

We review the district court’s grant of summary judgment de novo, *Feldman v. Allstate Ins. Co.*, 322 F.3d 660, 665 (9th Cir. 2003), and its grant of injunctive relief for abuse of discretion, *Rolex Watch, U.S.A., Inc. v. Michel Co.*, 179 F.3d 704, 708 (9th Cir. 1999). We have jurisdiction under 28 U.S.C. § 1291.

DISCUSSION

I. Compliance with the NFMA and the NWFP

[1] The NWFP requires LSRs to be managed to “protect and enhance conditions of late-successional and old-growth forest ecosystems.” NWFP 8. The NWFP has “[g]uidelines to reduce risks of large-scale disturbance,” which provide that “[s]ilvicultural activities aimed at reducing risk shall focus on younger stands in [LSRs],” and “the scale of . . . treatments should not generally result in degeneration of currently suitable owl habitat or other late-successional conditions.” To avoid degeneration, “logging and other ground-disturbing activities are generally prohibited” in LSRs. *Or. Natural Res.*

Council Fund v. Brong, 492 F.3d 1120, 1126 (9th Cir. 2007) (quoting *Seattle Audubon Soc'y*, 871 F. Supp. at 1304-05).

[2] However, the NWFP permits logging activities in LSRs if: “(1) the proposed management activities will clearly result in greater assurance of long-term maintenance of habitat, (2) the activities are clearly needed to reduce risks, and (3) the activities will not prevent the [LSRs] from playing an effective role in the objectives for which they were established.” Standards and Guidelines for Management of Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl C-13 (April 13, 1994) [hereinafter NWFP S. & G.]. The NWFP acknowledges that some logging “may reduce the quality of habitat for late-successional organisms” and that “managers need to seek a balanced approach that reduces the risk of fire while protecting large areas of fire-prone late-successional forest.” NWFP S. & G. B-7.

Our highest deference is owed to the Forest Service’s technical analyses and judgments within its area of expertise, *Lands Council*, 537 F.3d at 993; nonetheless, our dissenting colleague would have us halt the Forest Service’s Project because he does not like the Forest Service’s approach to solving the problems addressed. We went en banc to foreclose precisely this type of second-guessing of the Forest Service. *See id.* at 988 (noting that “in recent years, our environmental jurisprudence has, at times, shifted away from the appropriate standard of review and could be read to suggest that this court should” “act as a panel of scientists that instructs the Forest Service” how to perform its expert duties). The Forest Service thoroughly considered various reasonable approaches to “protect and enhance conditions” of the LRSs, NWFP S. & G. at C-11, and offered a plan that does not “run[] counter to the evidence before the agency or is so implausible that it could be not ascribed to a difference in view or the product of agency expertise,” *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1156 (9th Cir. 2006), *abrogated on other grounds*

by *Winter v. Natural Re. Def. Council, Inc.*, 129 S. Ct. 365 (2008). Far from conflicting with the protection of LSRs, carefully controlled logging is a tool expressly authorized by the NWFP for long-term LSR maintenance.

[3] Our dissenting colleague simply articulates a different point of view, and an extreme one at that. He begins by implying that the law provides that under no circumstances can any old growth timber be cut from an LSR. Dissent at 11586-87. Eventually, however, our colleague reluctantly admits that is simply not the case. Dissent at 11587-88 (“[T]he NWFP . . . recognize[s] that in some LRSs [including the Davis LSR], stand management that includes older trees may be considered.”). Thus, it is clear that the limited logging of LSR trees of all types and ages is permissible if such logging complies with the three NWFP requirements previously described. There is no dispute that the Forest Service correctly identified that standard. The question, then, is not whether such logging within the LSR is generally permitted, but whether the Forest Service’s determination that the NWFP requirements for cutting some trees in an LSR were met was arbitrary or capricious. We now turn to that analysis.

After the Davis fire, the Forest Service determined that logging was necessary to protect the Davis LSR from future fires and that the Project met the three NWFP criteria for logging within LSRs. It noted that in the previous five years, “approximately 16,654 acres of NRF habitat ha[d] been lost mostly due to wildfires.” The Project, in comparison, calls for thinning only 618 acres of NRF habitat. This would leave 93 percent of existing NRF habitat and 96 percent of spotted owl critical habitat in the Davis LSR. The Project would reduce fire risks by 40 percent over Alternative A (the no action alternative). Wildfire accounted for 75 percent of the disturbance-caused loss of spotted owl habitat between 1994 and 2003.

After a lengthy and thorough discussion of the alternatives considered, the Forest Service concluded that:

Alternative C best responds to the issue of impacts to the northern spotted owl because [1] Alternative C would alter fewer acres of NRF habitat than Alternative B; [2] Alternative C would maintain at least three areas of habitat that are available for immediate occupancy by dispersing or relocating spotted owls; and [3] Alternative C provides the best strategy for risk reduction and long-term maintenance of spotted owl habitat on the landscape.

According to the Forest Service's modeling, "in Alternative C, fires appear to have the least travel times and protect [spotted] owl home ranges the best."⁶ After comparing the alternatives, the Forest Service determined that this plan would "clearly result in greater assurance of long-term maintenance of habitat," given the high threat of another catastrophic wildfire. In fact, it found that the "[p]roposed activities would not only reduce risk of large-scale disturbance, but would accelerate the ability of the Davis LSR to play a role for which late-successional reserves were established." The Conservation Groups challenge the Forest Service's conclusions on three grounds.

First, the Conservation Groups allege that the Forest Service knew that the Project would not clearly result in greater assurance of long-term maintenance of habitat. There are two

⁶The dissent is mistaken that "[t]he three alternatives (A, B, and C) are not compared with either a decision not to log in the LSR or to thin only small trees." Dissent at 11596. Alternative A is the no logging alternative. See FS ROD at 13 ("Alternative A—No Action[:] The purpose of this alternative is to allow current processes to continue, along with associated risks and benefits[.] . . . Under the No Action alternative, . . . [n]o additional thinning or fuels treatments would be implemented to accomplish project goals. . . . In Alternative A (no action), no risk reduction activities would occur; therefore, the potential remains for large-scale loss of northern spotted owl habitat, similar to the scale seen in the Davis Fire of 2003. These disturbance events are expected to increase the potential to become more frequent and larger in scope than at present."). The Forest Service also considered the option to thin only small trees. See *infra* p. 11574.

related problems with this position. The Conservation Groups rely heavily on a section of the EIS labeled “Issues” to suggest that the Forest Service knew that the treatments would have long-term detrimental effects on spotted owl habitat. This section states: “These activities may reduce the quality, effectiveness, and the distribution of habitat available to the northern spotted owl in the planning area for the short- and long-term as well as directly, indirectly and/or cumulatively.” However, this excerpt is simply a republication of potential *issues* identified by the public and the Forest Service; it is not a *finding* made by the Forest Service and is not, as the Conservation Groups allege, evidence that the Forest Service “specifically determined” that such damage would actually occur.

[4] More to the point, however, there is no dispute that the Forest Service knew of (and acknowledged) possible detrimental effects to the spotted owl. Specifically, it stated that “[i]n those units proposed for commercial timber harvest the conversion of existing NRF habitat to a foraging and dispersal condition is expected to be at least a short-term effect.” The Forest Service also estimated that “[b]ased on modeling, the return to NRF conditions will take 2-5 decades depending on the thinning intensity prescribed.”⁷ The Conservation Groups’ statement of harms obfuscates the issue, which is not how long the harms might last but whether the benefits will outweigh the costs in the long-term.

[5] Thus, the Forest Service’s alleged admissions about possible harms actually describe the balancing of risks that the Forest Service was required to undertake. Such balancing is entirely appropriate under the NWFP, which states that treatments in LSRs “may reduce the quality of habitat for late-

⁷The Conservation Groups vigorously argued that two to five decades is an intolerably long time, but ultimately conceded at oral argument that twenty to fifty years is a comparatively short span of time for forests that have been in existence for thousands of years.

successional organisms,” and that “managers need to seek a *balanced approach* that reduces risk of fire while protecting large areas of fire-prone late-successional forest.” NWFP B-8 (emphasis added). After detailing possible detrimental effects, the Forest Service made clear that those effects were limited and relatively short-term and, most importantly, would be outweighed by the overall improvement and continued viability of spotted owl NRF habitat. Indeed, it seems that avoiding detrimental effects altogether was impossible, because the Forest Service found that “[a]ll alternatives, including passive management, [m]ay affect, and are likely to adversely affect[,] the northern spotted owl.” Five Buttes ROD 13.⁸

Second, the Conservation Groups argue that the Forest Service failed to consider a study published by Forest Service scientists examining the Forest Service’s forest treatment and fire models. *See* Alan A. Ager, et al., *Modeling Wildfire Risk to Northern Spotted Owl (Strix Occidentalis Caurina) Habitat in Central Oregon, USA*, 246 Forest Ecology & Mgmt. 45 (2007) (the Ager study). Unlike past studies, the Ager study examined the possibility of risk reduction without treatments within spotted owl territory. *Id.* at 54.

As an initial matter, the Ager study was published after the administrative record was closed and the Forest Service had made its final decision, and well after the Forest Service developed the Project. Its relevance to what the Forest Service

⁸The dissent argues that the Forest Service’s assessment of risk is “skewed by its focus on one lone variable—reduction in fire risk.” Dissent at 11594. But that is clearly not accurate. We agree with the dissent that the absurd result of bulldozing the LSR could be justified by an approach that values only fire risk reduction. But the Forest Service did not choose such a “nonsensical” scenario precisely because it was concerned with long-term forest preservation, not simply reduced fire risk. In fact, the Forest Service chose Alternative C, which cut more LSR trees than Alternative A (the no-cutting alternative) but *fewer* LSR trees than Alternative B. This choice was made after a careful balancing of the risks and benefits of the treatments.

knew about the viability of risk-reduction exclusively outside of spotted owl territory is tenuous at best. Second, the Ager study was intended as a general examination of modeling capabilities, not as a means of determining an appropriate course of action for the Project. Ager Study 46 (“In this paper, we describe a wildfire risk analysis system for quantifying potential wildfire impacts on spotted owl habitat and measuring the efficacy of landscape fuel treatment on reducing risk.”). The study estimated that, by logging 20 percent of the forest area outside spotted owl habitat, the Forest Service could reduce the average burn probability by 44 percent. Ager Study 50, Table 1. Alternative C, which includes logging in some unoccupied spotted owl habitat, would reduce burn probability by 40 percent. Thus, the Conservation Groups use the Ager study as a strawman because the study did not determine if it was possible, let alone desirable, to log 20 percent of the Project Area. Alternative C, in comparison, treats less than 6 percent of the Project Area with almost the same reduction of burn probability.

In fact, the Ager study itself acknowledges that “allowing treatments *within* spotted owl habitat in the present study would have *substantially decreased the expected habitat loss* at a given treatment intensity.” Ager Study 55 (emphases added). Because the Forest Service is tasked with developing a viable plan that will clearly result in the long-term maintenance of spotted owl habitat, we fail to see how the Ager study, which deals with general modeling capabilities and experimental risk-reduction approaches, contradicts the Forest Service’s practical determination that some logging in the Davis LSR was clearly necessary to retain long-term forest and species health.

Finally, the Conservation Groups claim that it was not clearly necessary to cut larger diameter trees. The Groups raised this issue with the Forest Service after reviewing the draft EIS, and the Forest Service actively considered the alternative of thinning only small diameter trees by conducting

additional modeling. The Forest Service found that “modeling of fire behavior and vegetation indicated that small diameter thinning by itself would not considerably change the expected fire behavior on a landscape scale.” In the ROD, the Forest Service also explained that “[r]eduction of competition between trees in overstocked sites through commercial thinning is a hedge against epidemic loss of the larger trees to insect and disease.” Thus, the Forest Service determined that cutting some⁹ larger diameter trees was clearly necessary and met the NWFP standard.

[6] In sum, the Conservation Groups have not demonstrated that the Forest Service made a clear error of judgment in determining that the proposed treatments conformed with the NWFP, or that the decision to implement Alternative C was arbitrary or capricious.¹⁰ See *Lands Council*, 537 F.3d at 993 (holding that the proper role for a reviewing court “is simply to ensure that the Forest Service made no clear error of judgment that would render its action arbitrary and capricious” (internal quotation marks omitted)).

We agree with the dissent’s sentiment regarding the “importance of a[n] LSR in fulfilling the objectives of the NWFP.” Dissent at 11582. We differ from the dissent, however, in our view that no member of the panel is better equipped than the experts at the Forest Service to determine how best to fulfill those objectives. That task goes to the very heart of the Forest Service’s expertise. Indeed, where the Forest Service has determined that stand treatments are *clearly needed* to reduce risks, will *clearly result* in greater assurance of long term maintenance of habitat, and will not prevent the LSR from playing the role for which they were established,

⁹A majority of the trees to be cut under the Project are smaller diameter trees.

¹⁰Importantly, the Conservation Groups do not challenge the modeling techniques or quantitative results used by the Forest Service, and our independent review of those matters gives us no reason to doubt their validity.

NWFP S. & G. at C-13, we should be loathe to second guess their efforts absent some glaring error, oversight, or arbitrary action, lest we be the ones who upset the LSR's "ancient and intricate process . . . because we do not fully understand [its] inner workings," Dissent at 11582.

[7] As the Conservation Groups conceded at oral argument, the district court's holding that "[t]he findings in the ROD are not strong enough to meet" the NWFP standard does not accord the Forest Service proper deference. Because we find that the Project does not reflect any clear error in judgment by the Forest Service, we reverse the district court and hold that the Project does not violate the NFMA.

II. Compliance with NEPA

The Conservation Groups also allege that the Forest Service violated NEPA because, first, the EIS's cumulative impact methodology was deficient and, second, the EIS failed to adequately deal with opposing views on the impact and efficacy of thinning larger trees. We disagree.

We note first that NEPA does not impose substantive requirements—it "exists to ensure a *process*," *Inland Empire Pub. Lands Council*, 88 F.3d at 758, and "aims to make certain that 'the agency . . . will have available, and will carefully consider, detailed information concerning significant environmental impacts,' and 'that the relevant information will be made available to the [public],' " *Lands Council*, 537 F.3d at 1000 (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)).

A. Cumulative Impact

[8] NEPA requires federal agencies proposing "major Federal action[] significantly affecting the quality of the human environment" to prepare a detailed EIS on the proposed action, including an analysis of alternatives and a discussion

of the significant environmental impacts. 42 U.S.C. § 4332(2)(C). An EIS must include a detailed statement on:

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses . . . and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Id.

[9] The Council on Environmental Quality (CEQ), a body created by NEPA, “promulgated regulations to promote compliance with the ‘action-forcing’ requirements of NEPA Although initially advisory in nature, the regulations were made binding on the administrative agencies by Executive Order No. 11991, 3 C.F.R. § 124.” *Churchill County*, 276 F.3d at 1072 n.7. The CEQ regulations require an EIS to assess the “cumulative impact” of a proposed action, defined as the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. Our role in reviewing an EIS is “to ensure that the agency has taken a ‘hard look’ at the potential environmental consequences of the proposed action.” *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004) (quoting *Churchill County*, 276 F.3d at 1072).

In 2005, the CEQ issued a memorandum advising agencies that they “are not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined.” James L. Connaughton, Chairman, CEQ, Guidance on the Consideration of Past Actions on Cumulative Effects Analysis

2 (June 24, 2005), *available at* http://gc.energy.gov/NEPA/nepa_documents/TOOLS/GUIDANCE/Volume1/4-11.2_cumulative_effects_june24-05.pdf (CEQ Memorandum) (last visited July 30, 2010). This interpretation of the cumulative impact requirement is referred to as the “aggregate effects” approach. CEQ Memorandum 2. The “CEQ’s interpretation of NEPA is entitled to substantial deference.” *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979).

[10] The district court determined that the EIS’s cumulative impact analysis was deficient for lack of detailed, quantitative information about past projects. District Court Order, 2008 WL 4279807, at *4 (“[T]he [past] projects have not been quantified with time, place, and scale data.”). This “time, place, and scale” language comes from *Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005), which held that a cumulative effects analysis violated NEPA because it failed to provide “adequate data of the time, type, place, and scale of past timber harvests.” *See also Brong*, 492 F.3d at 1133. However, soon after the district court issued its decision, and well after *Powell* and *Brong* were decided, we held that the CEQ’s aggregate effects approach—which does not necessarily require specific time, place, and scale data—is not plainly erroneous or inconsistent with NEPA. *See League of Wilderness Defenders–Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 549 F.3d 1211, 1217-18 (9th Cir. 2008); *accord Ecology Ctr. v. Castaneda*, 574 F.3d 652, 666 (9th Cir. 2009) (confirming that “the Forest Service may aggregate its cumulative effects analysis pursuant to 40 C.F.R. § 1508.7” (internal quotation marks omitted)).

The Forest Service explicitly relied on the CEQ Memorandum in creating its cumulative impact analysis. Specifically, the EIS noted that it was permissible to “focus[] on the current aggregate effects of past actions without delving into the details of individual past actions.” It then provided a table listing past, present, and foreseeable future projects, followed by

a detailed description of the relevant activities and the status of the projects.

[11] The Conservation Groups assert that, apart from not meeting the formalistic requirements that were erroneously imposed by the district court, the table does not contain enough detailed information about cumulative impact. However, this ignores the lengthy discussion of cumulative impact that follows in the EIS. With regard to the spotted owl, the EIS contains a thorough twenty-three-page discussion of previous declines, trends, and threats to the spotted owl population and habitat. It discusses each of the activities listed in the table to “assess whether, in combination with the Five Buttes Project, there would be overlap of time and space.” The EIS then describes possible overlapping effects from other projects and natural disasters such as wildfires, mushroom harvesting, and planned vegetation projects, and conducts a similar analysis with regard to soil quality, fires, fuels, and other species. This analysis fully complies with the requirement that the EIS consider aggregate effects of past, present, and future actions, and the Conservation Groups have not pointed to any past action or effect that was not considered. In fact, the inclusion of additional, unnecessary data in the EIS would run contrary to the purpose of NEPA, as “NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.” 40 C.F.R. § 1500.1(b).

The aggregate effects approach is not, as the district court held, “in contradiction to current Ninth Circuit law.” *See League of Wilderness Defenders*, 549 F.3d at 1217-18; *Castaneda*, 574 F.3d at 666. The EIS’s cumulative impact analysis was consistent with the CEQ guidelines and adequately considered cumulative effects of past, present, and reasonably foreseeable future projects in compliance with NEPA.

B. Opposing Views

The Conservation Groups also assert that the Project’s EIS failed to consider opposing scientific views on the impact of

thinning. They claim that the Project record “contains volumes of scientific information that counsel against logging large trees from older forests and that establish that there is, at a minimum, uncertainty as to whether the proposed treatment of older forests will have the desired effect of reducing the risk of natural disturbances.”

[12] An EIS must contain “a reasonably thorough discussion of the significant aspects of the probable environmental consequences.” *Ctr. for Biological Diversity*, 349 F.3d at 1166 (internal quotation marks omitted). A proper NEPA analysis “foster[s] both informed decision-making and informed public participation.” *Churchill County*, 276 F.3d at 1071 (quoting *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982)). Significantly, the Forest Service is only required to “acknowledge and respond to comments by outside parties that raise *significant scientific uncertainties and reasonably support that such uncertainties exist.*” *Lands Council*, 537 F.3d at 1001 (emphasis added).

[13] Here, the Conservation Groups incorrectly claim that the Forest Service failed to consider the view that priority should be given to cutting smaller trees. In fact, the Forest Service subscribes to that view, and the majority of tree removal is aimed at smaller trees. EIS 410 (“[T]he greatest density of trees that will be removed is in the smaller size classes, contributing to the greatest risk reduction.”). The EIS also explains that cutting small trees alone is not sufficient because “reduction of the smaller size classes, in general, does not contribute to reduction of crown bulk density,” which is important in preventing crown fires. The Forest Service also concluded that the removal of larger trees is required to reduce susceptibility to insect infestation and disease. In the EIS and ROD, the Forest Service addressed each of the Conservation Groups’ suggestions and concerns, even conducting additional modeling to determine if thinning only smaller trees might be feasible.

The Conservation Groups also describe two additional opposing views they feel were not taken into consideration. First, they claim that logging older trees would *increase* the risk of fire because of debris. This issue was adequately addressed and rebutted. The Forest Service stated that debris generated from the cutting would be removed, and the EIS established a maintenance schedule (burning every eight-to-twelve years, hand piling and disposal every fifteen-to-twenty years) for thinned areas to prevent dangerous build-up of ladder fuels. Finally, the Conservation Groups raised concerns about roads that would be built, but the Forest Service explained that the roads would be temporary, barricaded when not in use, and subsoiled to facilitate their return to vegetative productivity.

[14] We also note that the REO and the FWS conducted extensive independent reviews of the Project and found it to be consistent with NEPA. *See supra* Section 4; *cf. Ctr. for Biological Diversity*, 349 F.3d at 1161, 1169 (holding that Forest Service failed to consider opposing views where the FWS challenged the Forest Service's scientific conclusions). We hold that the Forest Service adequately considered and responded to alternative views about the Project's potential environmental consequences.

* * *

The Forest Service adequately considered the cumulative impact of past, present, and foreseeable future actions and sufficiently considered and responded to opposing scientific views. Therefore, we hold that the Forest Service complied with NEPA and took the requisite "hard look" at the environmental impacts of the Project.

CONCLUSION

For the foregoing reasons, we REVERSE, VACATE the injunction, and REMAND to the district court for entry of summary judgment in favor of the Forest Service.

PAEZ, Circuit Judge, dissenting:

I respectfully dissent.

Today, in direct conflict with the North West Forest Plan's (NWFP) Standards and Guidelines, the majority reverses a grant of summary judgement to the League of Wilderness Defenders, vacates a limited injunction, and permits logging of large trees on 618 acres in the protected Davis Late Successional Reserve (or LSR). The Davis LSR provides habitat for the threatened northern spotted owl. The U.S. Forest Service argues that the project is necessary to ensure the long-term survival of the Davis LSR and to reduce risks from wildfire and insect infestation. The Forest Service, however, gives no meaningful (or consistent) assessment of the actual risk to the Davis LSR of destruction by wildfire or insect infestation. Therefore, any reduction in the risk of destruction by wildfire or bug kill is never weighed as required by the NWFP against the sure cost of cutting inside this ancient forest. Nonetheless, the majority holds that the Forest Service decision to approve this project is consistent with the NWFP's Standards and Guidelines. Because I agree with the district court that the Five Buttes Project does not comport with the NWFP and therefore is in violation of the National Forest Management Act (NFMA), I would affirm the district court's summary judgment ruling on this issue and the related grant of injunctive relief.¹

I. Background

As part of the Five Buttes Project, the Forest Service plans to log 618 acres of large trees in protected old-growth forest, which provides habitat for the endangered northern spotted

¹I agree, however, with the majority's conclusion that in approving the Five Buttes Project, the Forest Service did not violate the National Environmental Policy Act. Because I believe the injunction should remain in force, I respectfully dissent.

owl. Old-growth forest is the end result of an ancient and intricate process. Its ecosystem is rich and complex, and because we do not fully understand the inner workings of the relationships between the plants and species that inhabit them, human harm to old-growth forests remains irreversible. In the words of John Muir, a preservationist and the man largely credited for the creation of Yosemite National Park:

It took more than three thousand years to make some of the trees in these Western woods,—trees that are still standing in perfect strength and beauty God has cared for these trees, saved them from drought, disease, avalanches, and a thousand straining, leveling tempests and floods, but he cannot save them from fools,—only Uncle Sam can do that.

John Muir, *American Forests*, Atlantic Monthly, Aug. 1897, at 145, 157.

A tremendous amount of scientific study, litigation, and effort on all sides of the issue has brought management of the Pacific Northwest's forests to the delicate balance it enjoys today. In 1994, in a historic step in Uncle Sam's effort to preserve and protect the viability of ancient forests in the Pacific Northwest, the Secretaries of the Interior and Agriculture adopted the NWFP. At the heart of the NWFP are areas of Pacific Northwest old-growth forest designated as Late Successional Reserves. These LSRs serve as refuges for the threatened northern spotted owl and preserves of the old-growth ecosystem. Except in extreme cases where logging is imperative to save a LSR itself, logging in a LSR is forbidden.

My disagreement with the majority centers on my understanding of the importance of a LSR in fulfilling the objectives of the NWFP. In order to appreciate the gravity of logging 618 acres of the Davis LSR, in my view, it is necessary to understand the titanic effort that went into creating the

NWFP and its protections. Therefore, I begin with a brief discussion of the background of the NWFP.

The NFMA of 1976 is the primary statute governing the administration of national forests. *See* 16 U.S.C. § 1600 *et seq.* The NFMA requires the Secretary of Agriculture to develop a management plan for each unit of the National Forest System. *Id.* § 1604(a). Each management plan must balance economic, recreation, and wildlife interests in a sustainable way and set standards and guidelines specifying how the forest shall be managed. *Id.* § 1604(e).

The forests of the Pacific Northwest are afforded an additional level of management and protection under the NFMA. This added protection—the NWFP—is a “comprehensive response to a long and bitter legal battle over the scope of logging in old-growth forests, home to the endangered spotted owl.” *Or. Natural Res. Council Fund v. Brong*, 492 F.3d 1120, 1126 (9th Cir. 2007).

In 1991, the Seattle Audubon Society along with other environmental groups challenged a proposal by the Forest Service to log northern spotted owl habitat in national forests located in Washington, Oregon, and Northern California. *See Seattle Audubon Soc'y v. Evans*, 771 F. Supp. 1081, 1083 (W.D. Wash. 1991).² In that case, the Audubon Society argued that by permitting logging in northern spotted owl habitat areas without assuring that a viable population of the species would be preserved, the Forest Service violated the NFMA and its regulations. *Id.* The district court agreed. *Id.* at 1096. Although the court recognized that “[a]ny reduction in federal timber sales will have adverse effects on some timber

²In *Seattle Audubon Society v. Evans*, the Forest Service argued that it was not required to comply with the NFMA. The district court soundly rejected that argument. 771 F. Supp. at 1086. The case is relevant here solely for the purpose of recounting the events that led up to the adoption of the NWFP in 1994.

industry firms and their employees,” it explained that “the loss of old growth forest is permanent” and concluded that “the public interest and balance of equities require the issuance of an injunction” against logging in northern spotted owl habitat. *Id.* In granting the injunction, the district court made findings of fact with respect to old growth forests. *See id.* at 1088-89. Those findings, apropos to the case at hand, address the importance and scarcity of old growth forests:

1. The fate of the spotted owl has become a battle-ground largely because the species is a symbol of the remaining old growth forest. . . .
2. An old growth forest consists not just of ancient standing trees, but of fallen trees, snags, massive decaying vegetation, and numerous resident plant and animal species, many of which live nowhere else.
3. A great conifer forest originally covered the western parts of Washington, Oregon, and Northern California, from the Cascade and Coast mountains to the sea. Perhaps ten percent of it remains. The spaces protected as parks or wilderness areas are not enough for the survival of the northern spotted owl.
4. The old growth forest sustains a biological community far richer than those of managed forests or tree farms. As testified by Dr. William Ferrell, a forest ecologist:

The most significant implication from our new knowledge regarding old-growth forest ecology is that logging these forests destroys not just trees, but a complex, distinctive, and unique ecosystem.

5. The remaining old growth stands are valued also for their effects on climate, air, and migratory fish runs, and for their beauty.

Id. (internal citations omitted).

In response to *Seattle Audubon Society v. Evans*, over a dozen other lawsuits, and two other injunctions involving timber harvesting in spotted owl habitat (i.e. Pacific Northwest old growth forests), in April 1993, President Clinton convened the Forest Conference in Portland, Oregon. *See Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*, Summary, April 13, 1994, available at <http://www.reo.gov/library/reports/newroda.pdf> [hereinafter *Record of Decision*]. At the Forest Conference, President Clinton asked:

How can we achieve a balanced and comprehensive policy that recognizes the importance of the forest and timber to the economy and jobs in this region, and how can we preserve our precious old-growth forests, which are part of our national heritage and that, once destroyed, can never be replaced?

Id. at 2. Following the Conference, President Clinton established the Forest Ecosystem Management Assessment Team (FEMAT) to make recommendations to the Secretaries of Agriculture and Interior and to assist in their joint development of a forest management plan for the federal forests in the Pacific Northwest. *See Seattle Audubon Soc'y v. Moseley*, 80 F.3d 1401, 1404 (9th Cir. 1996) (per curiam). "After reviewing 48 possible strategies, FEMAT narrowed the field to ten alternatives and assessed each in a single environmental impact statement ("EIS") prepared jointly by the Forest Service and Bureau of Land Management ("BLM")." *Id.* In April 1994, the Secretaries of the Interior and Agriculture adopted Alternative 9 and issued the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, commonly known as the Northwest Forest Plan (or NWFP). *Record of Decision* at 1; *Moseley*, 80 F.3d at 1404.

The NWFP divided the approximately 24.5 million acres of federal land within the northern spotted owl's range into several hierarchical allocations designated by the type of land use in each allocation. *Brong*, 492 F.3d at 1126; Northwest Forest Plan Standards and Guidelines (NWFP S & Gs) at A-1, A-7, B-1. Adherence to this hierarchy is the fundamental means by which the NWFP achieves its goal of protecting and enhancing habitat for late-successional and old-growth forest-related species. *Brong*, 492 F.3d at 1126. Six of the allocations are "reserve areas in which logging and other ground-disturbing activities are generally prohibited." *Seattle Audubon Soc'y v. Lyons*, 871 F.Supp. 1291, 1304-05 (W.D. Wash. 1994), *aff'd*, *Moseley*, 80 F.3d 1401. At the top of the hierarchy—the most protected designation—is that of Late Successional Reserve. As we noted in *Brong*, "LSRs lie at the heart of the NFP's ecosystem-based conservation strategy for the northern spotted owl and other endangered species." 492 F.3d at 1126.

The NWFP Standards and Guidelines set forth the purpose of LSRs and explain the basis for their heightened protection as follows:

[LSRs] represent a network of existing old-growth forests that are retained in their natural condition with natural processes, such as fire, allowed to function to the extent possible. The reserves are designed to serve a number of purposes. First, they provide a distribution, quantity, and quality of old-growth forest habitat sufficient to avoid foreclosure of future management options. Second, they provide habitat for populations of species that are associated with late-successional forests. Third, they will help ensure that late-successional species diversity will be conserved.

Late-successional forest communities are the result of a unique interaction of disturbance, regeneration,

succession, and climate that can never be recreated in their entirety through management. . . .

The objective of Late-Successional Reserves is 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 including the northern spotted owl.

NWFP S & Gs at B-4, B-5, C-11.

Pursuant to the NWFP's goals and objectives, trees within a LSR are almost chainsaw-untouchable. “[T]he NFP makes programmed ‘stand management’ activities, such as logging, impermissible in LSRs.” *Brong*, 492 F.3d at 1126. “Late-successional reserves are to be managed to protect and enhance old-growth forest conditions,” and, therefore, “[n]o programmed timber harvest is allowed inside the reserves.” *Record of Decision* at 8.

The Standards and Guidelines make an exception to the ban on logging within LSRs to permit limited logging of younger stands. NWFP S & Gs at C-12. The stated purpose of the younger-stand exception is to reduce the risk of large-scale disturbances. *Id.* “Large-scale disturbances are natural events, such as fire, that can eliminate spotted owl habitat on hundreds of thousands of acres.” *Id.* “Risk reduction efforts are encouraged where they are consistent with the overall recommendations of these guidelines.” *Id.* at C-13. Specifically, logging activities “aimed at reducing risk *shall focus on younger stands* in Late-Successional Reserves,” and “should *not* generally result in degeneration of currently suitable owl habitat or other late successional conditions.” *Id.* (emphasis added).

Above and beyond the limited exception permitting logging of younger trees in LSRs to reduce the risk of large-scale natural disturbances, the NWFP Standards and Guidelines recognize that in some LSRs east of the Oregon and California

Cascades, stand management that includes older trees may be considered. *Id.* Under the NWFP's Standards and Guidelines, however, any old-growth management within a LSR must comply with three requirements.

While risk-reduction efforts should generally be focused on young stands, activities in older stands may be appropriate if: (1) the proposed management activities will clearly result in greater assurance of long term maintenance of habitat, (2) the activities are clearly needed to reduce risks, and (3) the activities will not prevent the Late-Successional Reserves from playing an effective role in the objectives for which they were established.

Id.

In accord with the NFMA, the NWFP Standards and Guidelines are incorporated into the Deschutes Forest Plan and are enforceable against the Forest Service with respect to projects in the Forest. 16 U.S.C. § 1604(c); *see also Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 889 (9th Cir. 2007); *Brong*, 492 F.3d at 1131.

Here, the Five Buttes Project authorizes commercial logging in 2023 acres of old-growth forest habitat and non-commercial fuels treatments in approximately 8000 acres in the Deschutes National Forest. Over 600 acres of the project's commercial logging operation will take place in the Davis LSR, currently viable nesting-roosting-foraging (NRF) habitat of the northern spotted owl. The stated purpose of this project is two-fold: first, to "lessen the risk that disturbance events such as insect, disease, and wildfire will lead to large-scale loss of forest;" and, second, "to contribute to the local and regional economies by providing timber and other wood fiber products." *Five Buttes Record of Decision*, 7, June 2007, available at https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/7069/Five_Buttes_Project_Record_of_

Decision.pdf?sequence=1 [hereinafter *Five Buttes Record of Decision*].

The Forest Service argues and the majority agrees that the Five Buttes Project is consistent with the NWFP's Standards and Guidelines's three criteria for logging old-growth trees in a LSR. I disagree. While we cannot "substitute [our] judgment for that of the agency," here, the Forest Service has "failed to consider an important aspect of the problem" and, thus, has acted arbitrarily and capriciously. *Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008) (en banc) (quoting *Earth Island Inst. v. U.S. Forest Serv.*, 442 F.3d 1147, 1156 (9th Cir. 2006)), *abrogated on other grounds by Winter v. Natural Re. Def. Council, Inc.*, 129 S. Ct. 365 (2008).

II. Compliance with the NWFP's Standards and Guidelines for protected old-growth management

A. Clearly results in greater assurance of long term maintenance of habitat

The first requirement under the NWFP Standards and Guidelines is that a proposed stand management project within a LSR, such as the Five Buttes Project at issue here, clearly result in greater assurance of long-term maintenance of habitat. NWFP S & Gs at C-13. Here, although the Forest Service acknowledges the negative effects associated with logging 618 acres of protected old-growth forest in northern spotted owl territory, the Forest Service summarily concluded that any loss is clearly outweighed by the benefit from reduced fire risk. There are two problems with this conclusion. First, the Forest Service never explains its assumed risk of fire; nor, as the majority itself notes, is the Forest Service consistent as to what the actual risk would be of another Davis-type fire in the Deschutes National Forest. Second, the agency focuses almost entirely on one lone variable to measure stand management success—fire risk reduction. As

Plaintiffs argued, “[r]educing risk of habitat loss from wildfire or other natural disturbances . . . is not an objective in itself.” Plaintiffs’s Reply Br. at 32. By assessing benefits without considering the potential costs, the Forest Service “fail[s] to consider an important aspect of the problem” and impermissibly skews the comparison of management alternatives in favor of logging. *McNair*, 537 F.3d at 987.

The Forest Service recognizes that the Five Buttes Project will have potential long-term negative effects. The first such effect identified in the Record of Decision is that:

The sivicultural and fuels treatments [i.e. logging] proposed would reduce stem density, overall canopy cover, and may reduce the amount of down wood that provides prey base habitat. These activities may reduce the quality, effectiveness, and the distribution of habitat available to the northern spotted owl in the planning area for the short- and long-term as well as directly, indirectly and/or cumulatively. Consequences of active management may have a negative impact on the northern spotted owl and its ability to establish and maintain breeding territories, find sufficient prey base habitat, and disperse across the landscape.

Five Buttes Record of Decision at 12. The Forest Service also recognizes that following completion of the Five Buttes Project and its related logging activities, the Davis LSR will take up to fifty years to return to previous conditions. Five Buttes Project Environmental Impact Statement, Appendix D at 391. Furthermore, during those years, the Davis LSR “will be converted to foraging or dispersal habitat” and will no longer be suitable for nesting and roosting by the spotted owl.³ *Id.* The

³Northern spotted owl habitat is generally assessed for its nesting-roosting-foraging (NRF) capacity. The proposed project will eliminate the nesting and roosting capacities for 618 acres of current habitat.

majority points out that the Five Buttes Project is structured so that no spotted owl will be directly harmed. This is small consolation given that we have long recognized that “the continued existence of” an endangered or threatened species, like the spotted owl, requires not just protection from direct harm but also protection of habitat. 16 U.S.C. § 1536(a)(2); *see Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1063 (9th Cir. 2004).

The Forest Service justifies these short and long-term harms because the proposed management plan, according to a burn probability mapping computer simulation, would reduce the risk of another large crown fire occurring in the Davis LSR by 40 percent over the no action alternative.

The Forest Service, however, never explains the basis for its assigned current risk of fire. The Forest Service characterizes that risk as moderate to high, but never offers a meaningful rational for that assessment, explanation for how it arrived at that level of fire risk, or, most importantly, some explanation for what it actually means to conclude that the risk of a fire is moderate to high. Without any indication of how likely a fire is when the risk level is moderate to high, it is not possible, for example, to tell whether another Davis-type fire in the next decade on the Davis LSR is imminent, likely, or merely possible. A moderate to high risk may coincide with a 70 percent chance of a large-scale fire in the next decade. Or, a moderate to high risk may mean there is a mere 10 percent chance of another large-scale fire in the next decade.

Without such an actual assessment, the Forest Service cannot weigh the Five Buttes Project’s costs and benefits as required by the NWFP. The Forest Service selected Alternative C for its relative risk reduction. A calculation of relative risk reduction is sufficient to compare the three treatments against one another and to assess their relative worth as to fire reduction. Of the three treatments considered, Alternative C promises the greatest relative reduction in the risk of fire.

Therefore, if the Forest Service were only considering fire reduction, C would be the clear winner. Fire risk reduction, however, is not the only variable at play. The cost of the proposed project is 20-50 years during which 618 acres of NRF spotted owl habitat will be downgraded to only foraging habitat. The Forest Service must weigh the benefit of a 40 percent reduction in the risk of fire against the definite cost of the Five Buttes Project. Without some indication of what the actual risk of a fire is, that is, how likely a fire currently is, the value of any relative reduction in that risk is meaningless, and the true benefit of Alternative C remains unknown and, therefore, impossible to weigh against the known cost.⁴

In sum, the value of a 40 percent reduction in fire risk is meaningless without some studied consideration and quantifiable assessment of the current risk of a fire. Put simply, the benefit of the Five Buttes Project and its associated 40 percent reduction in fire risk will be greater if the current risk of a fire is 70 percent and it will be less if the current risk is 10 percent. That difference matters because the value of that benefit must still be weighed against the costs of the project. The Forest Service fails to offer any assessment in concrete terms of the current fire risk, and, therefore, the Forest Service fails to weigh the relative costs and benefits of the Five Buttes Project as required by the NWFP.

⁴For example, the Agar Study, cited by the majority, Majority Op. at 11572, notes that the natural fire return interval varies on the Deschutes National Forest depending on the type of vegetation and elevation. Alan A. Ager, et al., *Modeling Wildfire Risk to Northern Spotted Owl (Strix Occidentalis Caurina) Habitat in Central Oregon, USA*, 246 Forest Ecology & Mgmt. 45, 46 (2007). According to that study, old growth ponderosa pine forests in the Deschutes have a natural fire return interval of 4-11 years, whereas higher elevation mesic mountain hemlock forests have natural fire return intervals in the range of 50-200 years. Id. Without question, humans have altered the natural fire return intervals, and a large percentage of today's wildfires are due to human not natural causes. The Forest Service, however, makes no attempt to offer a reasoned prediction or assessment of the current likelihood of fire—natural or human caused—in the Davis LSR.

Despite the fact that the Forest Service never conducted a meaningful assessment of actual fire risk, the Forest Service in the final EIS asserts that there is a risk of another large-scale fire. The Forest Service, however, is inconsistent in its characterization of that risk. The EIS characterizes the risk of “a Problem Fire similar to the Davis Fire” as “moderate to high.” Later, the EIS characterizes the “risk of more large-scale loss of large trees and late-structure forest [due to fire]” as “extremely high.”⁵

The majority accepts these two characterizations as consistent. In my view, there is a difference between a “moderate to high” and an “extremely high” risk. Furthermore, that difference matters. If the risk of a fire is only moderate, then it is unlikely that the Forest Service could justify destroying 618 acres of existing old-growth forests to prevent the merely moderate threat. This is particularly true since forests east of the Cascades have a natural fire cycle and are, by the NWFP’s own Standards and Guidelines, to be “retained in their natural condition with natural processes, such as fire, allowed to function to the extent possible.” NWFP S & Gs at B-4.

Even if we assume the worst case scenario and that the risk of another fire like the Davis Fire is “extremely high,” the Forest Service has an obligation to explain and weigh that risk against the proposed alternative—certain destruction. While it may be generally accepted that wildfire is a common occurrence in eastern Oregon, as discussed above, no numerical measure is given in the record of the frequency of fire in the Deschutes National Forest. To pick Alternative C because it is 40 percent less likely to result in a crown fire *when there*

⁵The majority distinguishes between “the risk of a large scale loss of late-structured forest” and “the risk of a wholly devastating Davis-like fire.” Majority Op. at 11562 n.2. The Davis fire was a fire that caused the “large scale loss of late-structured forest.” Any distinction the majority attempts to make between the risk of “a large scale loss of late-structured forest” due to a fire and the risk of “a wholly devastating Davis-like fire” is irrelevant.

is a fire without a determination that includes the actual number of ignitions per year in the forest or some actual evaluation of the risk of fire unjustifiably weighs fire prevention above-and-beyond all other factors. The NWFP's Standards and Guidelines specifically require a "greater assurance" of long-term maintenance. NWFP S & Gs at C-13. *Greater* is a relative term that requires comparison. Without quantifying actual risk a comparison is not possible. The Forest Service's conflicting statements of fire risk, in my view, are arbitrary, and its failure to comply with the NWFP Standards and Guidelines' requirement that it compare costs and benefits is capricious.

The majority states that Plaintiffs misstate the issue when they identify the Five Buttes Project's associated harms. The majority suggests that the issue is, rather, not how long the harms will last, but whether the benefits outweigh the costs in the long-term. The problem is that the Forest Service has not sufficiently assessed the benefits to determine whether they outweigh the known costs. Not only is the record lacking any indication of what the actual reduction in fire risk will be in concrete terms, there is also no assessment nor consideration of how long the treatment under Alternative C will continue to reduce the risk of fire. If, following that treatment, fire risk conditions are predicted to return to their current levels in 20 years, then the cost of losing protected NRF habitat for 20-50 years would hardly be worth the 20 year benefit. No such analysis is found in the record, and for this reason as well, the Forest Service failed to weigh the costs and benefits and assure *greater* long-term maintenance of the Davis LSR.

Second, the Forest Service's assessment of successful management is skewed by its focus on one lone variable—reduction in fire risk. Normally we refrain from reviewing an agency's scientific methodology and defer to the agency's expertise. *See McNair*, 537 F.3d at 993. Basic flaws in reasoning and faulty science warrant no such deference. *See Earth Island Institute v. Hogarth*, 494 F.3d 757, 763-64 (9th Cir.

2007). The Forest Service for purposes of the Five Buttes Project not only assumes an unexplained and inconsistent risk of fire, it also looks at only one variable as its measure of successful management. The problem with this sort of science is that it can lead, and does so here, to a nonsensical result. Namely, the Forest Service can justify commercially logging 618 acres of spotted owl habitat in the Davis LSR for the stated purpose of preserving the forest.

To illustrate, consider the following example. Assume that the Forest Service considered a fourth alternative, Alternative D, and that Alternative D called for bulldozing all 618 acres of the affected LSR old growth. Surely clear cutting the forest—so there are no trees whatsoever—is unlikely to “clearly result[] in greater assurance of long term maintenance of habitat.” Clear cutting, however, would leave no trees, and so the likelihood that a fire would either start or spread would be drastically reduced. In fact, there would be zero risk of a crown fire. Therefore, despite the fact that the area would no longer be viable for nesting or roosting, of the alternatives presented and using the Forest Services’ parameters to measure success—i.e., the greatest success tied to the greatest reduction in risk of fire—we get the nonsensical result that bulldozing the Davis LSR would be the optimal management plan because it would assure maximum reduction in the risk of a fire.⁶

⁶The majority suggests that because Alternative C involves cutting fewer Davis LSR trees than Alternative B, this disproves this bulldozing hypothetical. The majority is mistaken. Alternative C may cut fewer Davis LSR trees and fewer trees for commercial harvest, but Alternative C still cuts down the most trees total of the three alternatives. Alternative B reduces fuels (i.e. cuts trees) on 5,522 acres and Alternative C cuts trees on 7,798 acres (4,235 acres for “commercial harvest” and 3,563 acres for reasons other than commercial harvest). *See* Five Buttes Environmental Impact Statement (EIS), 49 Table 2-3, June 2007, *available at* https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/7061/Five_Buttes_Project_EIS.pdf?sequence=1=1. Furthermore, the majority misses the point. The point is that the alternatives were weighed for their relative

The Forest Service does suggest and offer for comparison three alternatives (A, B, and C). All three, however, are considered primarily for their relative ability to reduce the risk of fire. These options not only assume a fire, they assume that the paramount benefit is the reduced risk of fire. Framing the issue this way ignores all of the other important purposes that LSRs serve. As noted above, the reserves provide habitat for populations of species that are associated with late-successional forests and they help ensure that late-successional species diversity will be preserved. LSRs also affect the regional climate, air, and migratory fish runs.

In short, the Forest Service conflates reducing the risk of fire and “long-term maintenance of habitat.” While it is true that a fire would destroy the habitat, it is equally true that logging inside a LSR destroys it. These harms are never balanced, and so the “greater” effectiveness of the proposed action remains an illusive goal.

Finally, the Forest Service fails to fully consider important alternatives. The three alternatives (A, B, and C) are not compared with either a decision not to log in the Davis LSR or to thin only small trees. The majority claims that Alternative A “is the no logging alternative.” Majority Op. at 11570 n.6. The majority, however, confuses a decision not to log *in the Davis LSR* with Alternative A, a decision not to log *at all*. The Five Buttes Project covers 160,000 acres and, as the majority notes, “authorizes management treatments, including commercial logging, across approximately 5,522 acres,” and “commercial logging in 618 acres of NRF habitat in the Davis LSR.” *Id.* at 11559. A decision not to log in the Davis LSR

reduction of fire risk above and beyond all other considerations. As Plaintiffs point out in their reply brief, such an approach amounts to “an assessment of the benefits without consideration of the potential costs,” and “[i]f a showing of risk reduction could satisfy the [NWFP] standard, then the standard would have no meaning” Plaintiffs’s Reply Br. at 17.

would affect a small fraction of the current Five Buttes Project, namely the acres to be logged *in the Davis LSR*. Alternative A, on the other hand, would affect all 160,000 acres of the Five Buttes Project area and would stop commercial logging on the 618 acres in the Davis LSR *and* the 5,522 acres outside the LSR. Alternative A, not to log at all, is distinct from a decision not to log within the Davis LSR.

The Forest Service discounts the option to either (1) not log in the Davis LSR or (2) to thin only small trees because, the Forest Services concludes, these two options would not change fire behavior and would not reduce the spread of fire. Here, the Forest Service focuses on the likelihood, under these two conditions, that a fire will turn into a specific type of fire, namely a crown fire. The Forest Service does not report, however, what the reduction in the likelihood of fire would be under either of these scenarios. While a treatment of ladder fuels may not prevent crown fires, it may substantially reduce fire ignitions, perhaps even below the levels of Alternative C, while simultaneously permitting the 618 acres of the Davis LSR to continue to serve as NRF habitat. Without an analysis of the reduction in fire risk—the variable the agency has put above all others—and a consideration of actual risk, the Forest Service has not fully considered and compared of the benefits and costs of either not logging in the Davis LSR or logging only smaller stands.

The majority states that the Forest Service's decision to cut large trees was "clearly necessary" based on the Forest Service's assertion that "commercial thinning is a hedge against epidemic loss of the larger trees to insect and disease." Aside from this bald statement, the Forest Service offers no study or observational findings or even causal explanation to support its conclusion that fewer large trees decreases the likelihood of bug infestation or kill.

In sum, the Forest Service's failure to consider the complex variables involved in forest management and its fixation on

reduced risk of fire results in an unconsidered analysis that fails to meet the requirements of the NWFP. Because the Forest Service did not look to quantifiable variables nor make a reasonable prediction of actual current risk of a fire, it “entirely failed to consider an important aspect of the problem” and, therefore, acted arbitrarily and capriciously in finding that the Five Buttes Project would clearly result in greater assurance of long term maintenance or habitat. *McNair*, 537 F.3d at 987.

B. *Clearly needed to reduce risks*

In a related error, the Forest Service fails to establish that the Five Buttes Project is clearly needed to reduce risks. In the one page section of the EIS discussing adherence to the three NWFP’s Standards and Guidelines’s requirements for logging within LSRs, under the heading “the activities are clearly needed to reduce risks,” the Forest Service offers the following analysis and justification for the project:

The project area also includes the 21,000-acre Davis Fire of 2003; many thousands of acres of late successional habitat and large trees were lost in this fire. Vegetation management activities are needed because vegetative conditions are such that risk of more large—scale loss of large trees and late—structure forest is extremely high. For instance, existing overstory ponderosa pine and Douglas—fir can not compete with true fir in overcrowded conditions. The trend in these forests is for the large—tree component to decline due to overcrowding from and competition with younger, smaller trees.

Five Buttes Project Environmental Impact Statement 359 (EIS). These four sentences mark the entirety of the EIS’s discussion of why the Five Buttes Project is “clearly needed to reduce risks.” The reasoning is unsupported and conclusory. Without determining the likelihood of another large fire, the

Forest Service relies on the relatively recent 2003 Davis Fire to justify fire risk reduction at any cost:

Although there is no way to predict the severity or timing of these events, the 21,000-acre Davis Fire of 2003 resulted in the loss of at least 5,090 acres of [nesting-roosting-foraging habitat]. Since vegetation conditions similar to those associated with the Davis Fire still exist on the landscape and would not change under Alternative A, the risk of another large-scale fire like the Davis Fire is high.

EIS at 108.

The aftermath of the Davis Fire may have left lingering concerns that another large fire is inevitable, but the Forest Service has an obligation under the NWFP's Standards and Guidelines to be sure that the proposed management activities are *clearly needed* to reduce the risk of fire or insect infestation. To assume another Davis type fire will occur based on the 2003 Davis fire alone is unsound. By that reasoning, the fact that the old-growth trees that the Five Buttes Project intends to log are over a hundred years old and have not burned in all that time proves that a large fire will not occur for another hundred years.

Here, at the very least, the Forest Service should have factored into its decision-making process (1) the frequency of major fires in the Deschutes National Forest and (2) the number of actual ignitions each year. Instead, the Forest Service relies on a computer simulation that uses 500 ignitions and locates starts on top of owl habitat.⁷ Of course the result

⁷The Forest Service relied on a computer simulation to predict the reduction in fire risk of the three alternatives. That computer simulation itself assumes a fire. And, in looking at fire behavior, the Forest Service pre-ordains its results by hand selecting ignition points. "The ignition points were chosen in key locations, such as occupied owl home ranges . . . to display potential effect[s] on fire behavior." EIS at 91.

seems apocalyptic. But it is not grounded in any actual information about fire frequency on the Deschutes or the likelihood of another Davis-type fire.

Finally, the final two sentences of the four sentence explanation for how the Five Buttes Project will “clearly reduce risk” are entirely non-responsive to the question of risk reduction and seem to weigh against, not in favor of, harvesting old-growth trees to reduce fire. That is, if the natural trend is for the large tree component to decline, why is the agency in a rush to cut large trees? The natural forest process appears to result in a reduction of large-tree density and, thereby, decreases the likelihood of a crown fire all on its own.

Without providing a basis for the level of assumed fire risk, it is impossible to say that a 40 percent reduction in risk justifies the guaranteed risk of commercial logging: the destruction of 618 acres of owl habitat for 20-50 years. Logging within late-successional forests inside a LSR is permitted only where the proposed logging is not just needed, but rather *clearly needed* to reduce risks. The NWFP’s Standards and Guidelines squarely place the burden on the Forest Service to establish that an exception to the general prohibition on logging applies. *See Brong*, 492 F.3d at 1120. The Forest Service in the present case has not carried that burden.

Despite the majority’s accusation to the contrary, I am well aware that it is not our role to ”second-guess” the Forest Service’s approach. The Forest Service’s approval of the Five Buttes Project is given considerable deference. As the Supreme Court has pointed out in another context, however, “the principle has its limits. Deference does not mean acquiescence.” *Presley v. Etowah County Comm’n*, 502 U.S. 491, 508 (1992). Here, the Forest Service has approved a LSR treatment project that does not, in my view, comply with the NWFP’s Standards and Guidelines’s three criteria for logging old-growth trees in a LSR. The Forest Service’s conclusion to the contrary suffers from basic flaws in the agency’s

reasoning—such as, for example, a failure to (1) weigh the costs alongside the benefits of the proposed action, (2) calculate the actual value of the estimated benefit of Alternative C, and (3) consider an alternative treatment plan that would not include logging inside the Davis LSR—and the agency’s approval of the Five Buttes Project is therefore “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A).

C. *Will not prevent the Late-Successional Reserves from playing an effective role in the objectives for which they were established*

Under the NWFP, logging in LSRs in the eastern Cascades for the purpose of reducing the risk of fire must not prevent the LSR from “playing an effective role in the objectives for which they were established.” The NWFP lays out the objectives of LSRs as follows:

[t]he objective of Late-Successional Reserves is 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 including the northern spotted owl. These reserves are designed to maintain a functional, interacting, late-successional and old-growth forest ecosystem.

NWFP S & Gs at C-9. In the NWFP’s Record of Decision, the Forest Service explains that reserves are “designed to maintain and enhance late-successional forests as a network of existing old-growth forest ecosystems” *Record of Decision* at B-4. “Until more experience and knowledge about active management to produce late-successional ecosystems is gained, sustaining late-successional ecosystems in the landscape will be best accomplished through retention of existing areas of late-successional forest.” *Id.* at B-4. And finally, “the scale of salvage and other treatments should not generally

result in degeneration of currently suitable owl habitat or other late-successional conditions.” *Id.* at C-13.

Here, the Five Buttes Project fails to adhere to any of these guiding principles: it neither retains existing areas of late-successional forest nor does it assure that the Davis LSR will not be reduced from suitable to unsuitable owl habitat.

In order to serve as habitat for the northern spotted owl, the Davis LSR must provide nesting, roosting, and foraging. The Forest Service points to the fact that logged areas would “remain suitable for foraging and dispersal habitat” after treatment. This is misleading because habitat for the spotted owl is not considered “suitable” by definition unless it supports nesting, roosting, *and* foraging. As stated in the Five Buttes Project final EIS, NRF stands within the project “will be converted to foraging or dispersal habitat for several decades,” and, therefore, render that habitat unviable for the owl. The impact of the Five Buttes Project is compounded by its wide reach—more than 600 acres—and by the fact that the habitat will not be suitable for owls again for as many as fifty years. The Five Buttes Project is unlike any other where a federal court in this circuit has upheld a decision by the Forest Service to allow logging in a LSR. All other such cases have involved minimal acreage, have avoided northern spotted owl habitat all together, or have been in response to a fire and in a LSR that has already burned and was, therefore, no longer suitable owl habitat. *See, e.g., Siskiyou Reg'l Educ. Project v. Goodman*, 2005 WL 2083011 (D. Or. July 29, 2005) (upholding logging project in a LSR after a fire where no green trees would be logged and salvage would not occur “in LSR-classified lands presently supporting late-successional habitat”), *aff'd, Siskiyou Reg'l Educ. Project v. Goodman*, 219 Fed.Appx. 692 (9th Cir. 2007); *Cascadia Wildlands Project v. Goodman*, 393 F. Supp. 2d 1041, 1049 (D. Or. 2004) (refusing to enjoin a logging project in a LSR that followed a fire and was “confined to areas with 100% tree mortality, which no longer function as owl habitat”).

The Forest Service only briefly addresses the long term degradation of the affected area. *See Five Buttes Record of Decision* at 19-20. This discussion, however, highlights the destruction rather than demonstrating that the Davis LSR will continue to “play an effective role” in maintaining owl habitat. The Forest Service states that it hopes to manage “60 percent of the remaining unburned area . . . maintaining at least 25 percent in NRF.” By implication, the Forest Service intends to render 75 percent of the remaining unburned Davis LSR area unsuitable for NRF.

Furthermore, in the EIS, rather than address the failure to meet the Davis LSR’s objectives, the Forest Service recharacterizes the objectives of the Davis LSR, stating that: “[a] main goal within the LSR is to minimize the likelihood of an active crown fire event.” The Forest Service entirely fails to look at the long-term degradation of habitat that is expected to result from the proposed logging. Reducing risk of habitat loss from wildfire or other natural disturbances may be one strategy to achieve the main objective—to protect and enhance the conditions of LSR ecosystems—but it is not an objective in itself. Here, the Forest Service uses risk-reduction as a justification for habitat degradation rather than a strategy to prevent habitat degradation.

By unnecessarily causing long-term degradation and modification of over 600 acres of existing suitable habitat for the northern spotted owl within the Davis LSR, the Five Buttes Project will “prevent the Late-Successional Reserve[] from playing an effective role in the objectives for which [it was] established.” Furthermore, the planned Five Buttes Project will “result in degeneration of currently suitable owl habitat” in violation of the NWFP’s Standards and Guidelines. NWFP S & Gs at C-13. The Five Buttes Project is plainly inconsistent with the NWFP’s directives regarding LSRs. As a result, the Forest Service’s approval of the plan to log 618 acres of old-growth forest in the Davis LSR violates the NFMA.

III. Conclusion

“[The Northwest Forest Plan] is not an ordinary government land management strategy; instead, the history and care in its creation bespeak the massive effort that led to its birth.” *Gifford Pinchot Task Force*, 378 F.3d at 1068. The NWFP amended the forest plans for nineteen national forests, including the Deschutes National Forest, and it is “the culmination of an unprecedented effort in public land management.” *Record of Decision* at Summary.

One of the primary accomplishments of the NWFP was the creation of a system of old-growth reserves, LSRs. The NWFP allows some limited treatment of these old and irreplaceable stands, but these activities are subject to three additional requirements: they must clearly result in greater assurance of long-term maintenance of habitat; they must be clearly needed to reduce risks; and they must not prevent a LSR from playing an effective role in the objectives for which it was established. The Five Buttes Project violates each of these three Standards and Guidelines and is contrary to the clear language of the NWFP.

I would affirm the district court’s grant of summary judgment in favor of Plaintiffs on their NFMA claim and its narrowly tailored injunction. I, therefore, respectfully dissent.