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U.S. COURT OF APPEALS

FOR PUBLICATION

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

THE LANDS COUNCIL; WILD WEST
INSTITUTE,

Plaintiffs - Appellants,

v.

RANOTTA MCNAIR, Forest Supervisor
for the Idaho Panhandle National Forests;
UNITED STATES FOREST SERVICE,

Defendants - Appellees,

BOUNDARY COUNTY; CITY OF
BONNERS FERRY; CITY OF MOYIE
SPRINGS; EVERHART LOGGING,
INC.; REGEHR LOGGING, INC.,

Defendant-Intervenors -
Appellees.

No. 07-35000

D.C. No. CV-06-00425-EJL

OPINION

Appeal from the United States District Court
for the District of Idaho
Edward J. Lodge, District Judge, Presiding

Argued and Submitted March 27, 2008
San Francisco, California

Filed

Before: ALEX KOZINSKI, Chief Judge, PAMELA ANN RYMER, ANDREW J. KLEINFELD, MICHAEL DALY HAWKINS, BARRY G. SILVERMAN, M. MARGARET MCKEOWN, RAYMOND C. FISHER, MARSHA S. BERZON, RICHARD R. CLIFTON, MILAN D. SMITH, JR., and N. RANDY SMITH, Circuit Judges.

Opinion by Judge Milan D. Smith, Jr.

MILAN D. SMITH, JR., Circuit Judge:

We took this case en banc to clarify some of our environmental jurisprudence with respect to our review of the actions of the United States Forest Service.

The Lands Council and Wild West Institute (collectively, Lands Council) moved for a preliminary injunction to halt the Mission Brush Project (the Project), which called for the selective logging of 3,829 acres of forest in the Idaho Panhandle National Forest (IPNF). As the basis for the preliminary injunction, Lands Council claimed that Ranotta McNair and the United States Forest Service (collectively, the Forest Service), failed to comply with the National Forest Management Act (NFMA), 16 U.S.C. § 1600 *et seq.*, the National Environmental Policy Act (NEPA), 42 U.S.C. § 4231 *et seq.*, and the Administrative Procedure Act (APA), 5 U.S.C. § 701 *et seq.*, in developing and implementing the Project.

Boundary County, City of Bonners Ferry, City of Moyie Springs, Everhart Logging, Inc., and Regehr Logging, Inc. (collectively, Intervenors) intervened on

behalf of the Forest Service. The district court denied Lands Council's motion for a preliminary injunction. A three-judge panel of this court reversed the district court's decision and remanded for entry of a preliminary injunction in *Lands Council v. McNair*, 494 F.3d 771 (9th Cir. 2007). We vacate that decision and affirm the district court.

I. FACTUAL AND PROCEDURAL BACKGROUND

A. Mission Brush Area

The Mission Brush Area (or Project Area) encompasses approximately 31,350 acres and is located in the northeastern portion of the Bonners Ferry Ranger District. Approximately 16,550 acres of the Project Area are National Forest System lands, which are home to a variety of species (or their habitats), including the northern gray wolf, Canada lynx, grizzly bear, black-backed woodpecker, flammulated owl, fisher, western toad, pileated woodpecker, and the white-tailed deer. The Project Area is also home to old-growth trees.

The current structure and composition of the forest in the Project Area differs significantly from the forest's historic composition. While the Project Area previously consisted of relatively open ponderosa pine and Douglas-fir stands, today it is crowded with stands of shade-tolerant, younger Douglas-firs and other mid-to-

late-successional species. The suppression of naturally occurring fires, past logging practices, and disease are primarily responsible for this shift in forest composition.

The increased density of trees has proven deleterious to the old-growth trees and the Project Area's ecology. First, old-growth trees need relatively open conditions to survive and maintain their growth rates. Second, the increased density is causing a decline in the health and vigor of all trees because they must compete for moisture, sunlight, and nutrients, and the densely clustered trees are less tolerant of insects and disease. Third, dense, dry forests are at risk for large, stand-replacing fires, due to the build-up of fuels. Lastly, wildlife species that prefer a relatively open forest composition with more old-growth trees have suffered a decline in habitat.

B. Mission Brush Project

The Forest Service proposed the Project, in part, to restore the forest to its historic composition, which, in the Forest Service's assessment, is more likely to be sustainable over time. But this is not the Project's only objective. According to the Supplemental Final Environmental Impact Statement (SFEIS) that the Forest Service issued in April 2006, the overall "objectives of the project are to begin restoring forest health and wildlife habitat, improv[e] water quality and overall aquatic habitat by reducing sediment and the risk of sediment reaching streams, and provid[e] recreation opportunities that meet the varied desires of the public and the agency while reducing

negative effects to the ecosystem.” The Project proposes to accomplish these varied objectives through a number of actions, such as improving roads that presently contribute to sediment in the watersheds, decommissioning roads posing a great risk of contributing to sediment, ensuring that the Project Area has acceptable toilets and wheelchair accessible pathways to toilets, installing a boat ramp and fishing dock, and improving trails.

After considering multiple approaches on how best to accomplish the Project’s goals with respect to forest composition, including one no-action alternative, the Forest Service chose to implement a modified version of Alternative 2. In relevant part, Alternative 2 calls for silvicultural treatments on 3,829 acres of forest, fuels treatments on 3,698 acres, and ecosystem burns without harvest on 238 acres. The

silvicultural treatments proposed include commercial thinning,¹ regeneration cuts,² and sanitation salvage harvesting.³

As a part of the Project, the Forest Service plans to treat 277 acres of dry-site old-growth stands in order to increase the overall quality of dry-site old-growth stands and scattered old-growth Douglas-fir, and to improve and maintain trees that could be old-growth in the future. Despite its plans to perform treatments within old-growth stands, the Project will not involve harvesting allocated old-growth trees. The Forest Service represented in the SFEIS that the allocated old-growth in the IPNF has not been harvested for several years, and that its “focus is on maintaining [existing] old growth stands . . . and allocating additional stands for future old growth as they mature.” In those units containing old-growth trees, the Forest Service has identified those non-old-growth trees it plans to harvest.

¹The glossary to the SFEIS explains that the primary objective of commercial thinning is to “stimulate growth of the residual stand, increase total yield, and utilize material that is suppressed,” by removing “approximately 1/3 of the stand, leaving larger trees evenly spaced with crowns free to grow before canopy closure occurs again.”

²The Forest Service proposed both even-aged and uneven-aged regeneration cuts; the former is designed to regenerate a stand with a single age class, and the latter is designed to maintain an uneven-aged structure “by removing some trees in all size classes either singly, in small groups, or in strips.”

³The glossary to the SFEIS explains that sanitation salvage involves the “removal of trees to improve stand health by stopping or reducing the spread of insects and disease,” and the removal of dead, damaged, or dying trees.

The Project is expected to generate 23.5 million board feet of timber, which has been, or will be, sold pursuant to three timber sale contracts: the Brushy Mission Sale, the Haller Down Sale, and the Mission Fly By Sale. The Forest Service sold the Brushy Mission Sale to Everhart Logging, and the Haller Down Sale to Regehr Logging. The Forest Service received no bids for the Mission Fly By Sale, which contains all but fourteen of the old-growth acres that are part of the Haller Down Sale. Though logging under the Brushy Mission and Haller Down sales has already begun, the injunction imposed by the district court pursuant to the three-judge panel opinion in *Lands Council*, 494 F.3d 771, prohibits the Forest Service from logging in the fourteen acres of old-growth in the Haller Down Sale. The same injunction imposes other restrictions on the Forest Service, including a prohibition on taking any action in the area encompassed by the Mission Fly By Sale.

C. Procedural History

In late 2002, the Forest Service decided to undertake management activities in the Mission and Brush Creek areas. In 2003, the Forest Service issued a draft Environmental Impact Statement (EIS). After receiving public comments, the Forest Service released its final EIS and Record of Decision (ROD) in June 2004. Lands Council appealed the ROD. The Forest Service upheld the Project, but ordered the preparation of a supplemental EIS in light of this court's decision in *Lands Council*

v. Powell (Lands Council I), 379 F.3d 738 (9th Cir. 2004), *amended by* 395 F.3d 1019 (9th Cir. 2005), which addressed the management of National Forest System lands in the IPNF in connection with a different Forest Service project. The Forest Service subsequently released a supplemental draft EIS for public comment, and issued the SFEIS and ROD in April 2006. Lands Council and other environmental groups filed an administrative appeal, which the Forest Service denied in July 2006. In October 2006, Lands Council filed this action and moved for a preliminary injunction.

II. STANDARD OF REVIEW AND JURISDICTION

We have jurisdiction to review a district court's denial of a preliminary injunction under 28 U.S.C. § 1292(a)(1). A district court's decision regarding preliminary injunctive relief is subject to "limited and deferential" review. *Sw. Voter Registration Educ. Project v. Shelley*, 344 F.3d 914, 918 (9th Cir. 2003) (en banc) (per curiam). Thus, we review the denial of a preliminary injunction for abuse of discretion. *Earth Island Inst. v. U.S. Forest Serv. (Earth Island Inst. II)*, 442 F.3d 1147, 1156 (9th Cir. 2006).

A district court abuses its discretion in denying a request for a preliminary injunction if it "base[s] its decision on an erroneous legal standard or clearly erroneous findings of fact." *Id.* (citation omitted). We review conclusions of law de novo and findings of fact for clear error. *Id.* Under this standard, "[a]s long as the

district court got the law right, it will not be reversed simply because the appellate court would have arrived at a different result if it had applied the law to the facts of the case.” *Id.* (quoting *Earth Island Inst. v. U.S. Forest Serv. (Earth Island Inst. I)*, 351 F.3d 1291, 1298 (9th Cir. 2003)).

“A preliminary injunction is appropriate when a plaintiff demonstrates ‘either: (1) a likelihood of success on the merits and the possibility of irreparable injury; or (2) that serious questions going to the merits were raised and the balance of hardships tips sharply in [the plaintiff’s] favor.’” *Lands Council v. Martin (Lands Council II)*, 479 F.3d 636, 639 (9th Cir. 2007) (quoting *Clear Channel Outdoor Inc. v. City of Los Angeles*, 340 F.3d 810, 813 (9th Cir. 2003)). These two options represent extremes on a single continuum: “the less certain the district court is of the likelihood of success on the merits, the more plaintiffs must convince the district court that the public interest and balance of hardships tip in their favor.” *Id.* (quoting *Sw. Voter Registration Educ. Project*, 344 F.3d at 918).

In deciding whether Lands Council is likely to succeed on the merits of its claims, we must remember that the APA provides the authority for our review of decisions under NEPA and NFMA. *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768, 778 (9th Cir. 2006). The APA states, in relevant part, that a reviewing court may

set aside only agency actions that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A).

Review under the arbitrary and capricious standard “is narrow, and [we do] not substitute [our] judgment for that of the agency.” *Earth Island Inst. II*, 442 F.3d at 1156 (citing *U.S. Postal Serv. v. Gregory*, 534 U.S. 1, 6-7 (2001)). 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.” *Id.* (citing *Sierra Club v. U.S. Env'tl. Prot. Agency*, 346 F.3d 955, 961 (9th Cir. 2003), *amended by* 352 F.3d 1186 (9th Cir. 2003)). Thus, although we review the district court’s denial of Lands Council’s request for a preliminary injunction for abuse of discretion, our review of the district court’s determination as to whether Lands Council was likely to prevail on the merits of its NEPA and NFMA claims necessarily incorporates the APA’s arbitrary and capricious standard.

III. DISCUSSION

Lands Council argues that, in developing the Project, the Forest Service violated the NFMA in two ways: (1) by failing to demonstrate the reliability of the

scientific methodology underlying its analysis of the Project's effect on wildlife, (specifically the flammulated owl and its habitat),⁴ and (2) by not complying with Standard 10(b) of the IPNF Forest Plan, which requires the Forest Service to maintain at least ten percent old-growth throughout the forest. Lands Council also argues that the Forest Service violated NEPA because, in Lands Council's view, the Forest Service did not adequately address the uncertainty concerning its proposed treatment as a strategy to maintain species viability.

⁴The scope of the arguments we address in this opinion comports with the representations that Lands Council made before this panel. *Specifically, at oral argument, Lands Council represented that, for the purpose of obtaining a preliminary injunction, it is concerned only with the treatment of the 277 acres that qualify as old-growth habitat and the treatment's effect on the flammulated owl and its habitat. Lands Council did not argue that the Forest Service's analysis was deficient with respect to any other species.*

We note, however, that Lands Council's position as to why a preliminary injunction is necessary has been a constantly moving target. To illustrate, in its opening brief before the district court, Lands Council argued that the Forest Service had violated the NFMA by failing to ensure habitat for old-growth species and viable populations of management indicator species. The only species Lands Council mentioned by name in its motion before the district court were the pileated woodpecker, black-backed woodpecker, grizzly bear, Canada lynx, and gray wolf; in its reply brief before the district court, Lands Council also mentioned the northern goshawk, the fisher, and the western toad.

In its opening brief on appeal, however, Lands Council changed the group of species about which it expressed concern, and argued that the Project will adversely affect the flammulated owl as well as the northern goshawk, the fisher, and the pileated woodpecker. Despite Lands Council's changing list of species, the Forest Service has not argued that Lands Council has waived any arguments with respect to any particular species.

In essence, Lands Council asks this court to act as a panel of scientists that instructs the Forest Service how to validate its hypotheses regarding wildlife viability, chooses among scientific studies in determining whether the Forest Service has complied with the underlying Forest Plan, and orders the agency to explain every possible scientific uncertainty. As we will explain, this is not a proper role for a federal appellate court. But Lands Council's arguments illustrate how, 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 play such a role.

Below, we address each of Lands Council's arguments. We first discuss the language and purpose of the NFMA and how, in *Ecology Center, Inc. v. Austin*, 430 F.3d 1057 (9th Cir. 2005), *cert. denied*, *Mineral County v. Ecology Center, Inc.*, 127 S. Ct. 931 (2007), we misconstrued what the NFMA requires of the Forest Service. We then turn to whether the Forest Service met the NFMA's requirements in this case; specifically, we consider the sufficiency of the Forest Service's analysis of the Project's effect on the flammulated owl and its habitat, and whether the Forest Service has complied with Standard 10(b) of the IPNF Forest Plan. Next, we consider the statutory language and purpose of NEPA, and whether, in this case, the Forest Service's alleged failure to discuss uncertainty regarding its strategy for species viability violated NEPA.

We are mindful, of course, that important environmental resources are at stake in cases such as this, and we strongly reaffirm that the Forest Service must fully comply with the requirements of the NFMA and NEPA. We conclude that the Forest Service has complied with those requirements in this case, and we affirm the district court's denial of Lands Council's request for a preliminary injunction.

A. The National Forest Management Act

1. Statutory Language And Purpose

The NFMA sets forth the statutory framework and specifies the procedural and substantive requirements under which the Forest Service is to manage National Forest System lands. Procedurally, the NFMA requires the Forest Service to develop a forest plan for each unit of the National Forest System. 16 U.S.C. § 1604(a). In developing and maintaining each plan, the Forest Service is required to use “a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences.” *Id.* § 1604(b). After a forest plan is developed, all subsequent agency action, including site-specific plans such as the Mission Brush Project, must comply with the NFMA and be consistent with the governing forest plan. *Id.* § 1604(i); see *Idaho Sporting Cong., Inc. v. Rittenhouse*, 305 F.3d 957, 962 (9th Cir. 2002) (“[A]ll management activities undertaken by the Forest Service must comply with the forest plan, which in turn must comply with the Forest Act.” (citing

Inland Empire Pub. Lands Council v. U.S. Forest Serv., 88 F.3d 754, 757 (9th Cir. 1996))).

Substantively, the NFMA requires the Secretary of Agriculture to develop guidelines “to achieve the goals of the Program,” including:

[P]rovid[ing] for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan . . .

16 U.S.C. § 1604(g)(3)(B); *see Env'tl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 451 F.3d 1005, 1017 (9th Cir. 2006) (“The NFMA imposes substantive duties on USFS, including the duty ‘to provide for diversity of plant and animal communities.’” (quoting 16 U.S.C. § 1604(g)(3)(B))).⁵

⁵The parties did not discuss what regulations implement 16 U.S.C. § 1604(g)(3)(B), but Lands Council suggested in a letter submitted under Rule 28(j) of the Federal Rules of Appellate Procedure that 36 C.F.R. § 219.19 is the applicable regulation. Section 219.19 required the Forest Service to manage wildlife habitat “to maintain viable populations of existing . . . species” and required the Forest Service to designate management indicator species (MIS) to monitor and evaluate wildlife viability. 36 C.F.R. § 219.19 (2000). This regulation is no longer in effect, *see Env'tl. Prot. Info. Ctr.*, 451 F.3d at 1017 & n.8 (“[N]ew regulations have eliminated the MIS concept . . .”), and at the time of filing, the Forest Service must abide by § 219.10(b), which only requires the Forest Service to “provid[e] appropriate ecological conditions to support diversity of . . . native animal species.” *See* 36 C.F.R. § 219.10(b) (2008). Section 219.10(b)

(continued...)

The Project also must be consistent with the IPNF Forest Plan’s provisions regarding wildlife viability. *See* 16 U.S.C. § 1604(i). In the IPNF Forest Plan, the Forest Service designated the flammulated owl, the only species at issue in this appeal, as a sensitive species. The IPNF Forest Plan requires the Forest Service to “[m]anage the habitat of species listed in the Regional Sensitive Species List to prevent further declines in populations which could lead to federal listing under the Endangered Species Act.” U.S. Dep’t of Agriculture, Forest Plan, Idaho Panhandle National Forests, at II-28 (Aug. 1987), available at <http://www.fs.fed.us/ipnf/eco/manage/forestplan/> [hereinafter IPNF Forest Plan].

Congress has consistently acknowledged that the Forest Service must balance competing demands in managing National Forest System lands. Indeed, since

⁵(...continued)
specifies that providing such ecological conditions satisfies the statutory requirement to provide for species diversity. *Id.*

We need not resolve Lands Council’s eleventh hour suggestion that § 219.19 is applicable because the SFEIS and ROD incorporated that regulation. Lands Council has not claimed that the Forest Service violated *any* specific regulation regarding wildlife viability. In fact, Lands Council’s brief does not cite any regulations to support its argument that the Forest Service violated the NFMA or NEPA. Moreover, the species that Lands Council focuses on, the flammulated owl, is not an MIS under § 219.19. The parties do, however, agree that the Project must comply with the IPNF Forest Plan’s requirements regarding species viability. The Forest Plan’s requirement, which is discussed below, does not materially differ from § 219.19’s requirement that the Forest Service must manage wildlife habitat to maintain viable populations of existing species.

Congress' early regulation of the national forests, it has never been the case that "the national forests were . . . to be 'set aside for non-use.'" *United States v. New Mexico*, 438 U.S. 696, 716 n.23 (1978) (citing 30 Cong. Rec. 966 (1897) (statement of Rep. McRae)). For example, in the Organic Administration Act of June 4, 1897, passed less than a decade after Congress began regulating the national forests, Congress identified two purposes for which it would reserve a national forest at that time: "[to] secur[e] favorable conditions of water flows, and to furnish a continuous supply of timber." *Id.* at 707-08 (quoting 16 U.S.C. § 475 (1976)).

Congress' current vision of national forest uses, a broader view than Congress articulated in 1897, is expressed in the Multiple-Use Sustained Yield Act of 1960, 16 U.S.C. §§ 528-31, which states that "[i]t is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." *Id.* § 528. The NFMA references 16 U.S.C. §§ 528-531 and requires that plans developed for units of the National Forest System "provide for multiple use and sustained yield of the products and services obtained therefrom . . . and [must] include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness[.]" *Id.* § 1604(e)(1). Thus, the NFMA is explicit that wildlife viability is not the Forest Service's only consideration when developing site-specific plans for National Forest System lands.

2. We Overrule *Ecology Center*

Lands Council argues that the Forest Service violated the NFMA because it has not demonstrated the reliability of the scientific methodology underlying its analysis of the effect of the Project's proposed treatment on the flammulated owl and its habitat. Relying primarily on *Ecology Center*, Lands Council specifically contends that the Forest Service erred by not verifying its prediction regarding the effect of treatment on old-growth species' habitat with observation or on-the-ground analysis. We disagree, and hereby overrule *Ecology Center*. We also hold that the district court did not abuse its discretion in concluding that Lands Council is unlikely to succeed on the merits of this claim.

In *Ecology Center*, we relied on *Lands Council I* when we grafted onto our jurisprudence a broad rule that, in effect, requires the Forest Service to always “demonstrate the reliability of its scientific methodology” or the hypotheses underlying the Service's methodology with “on the ground analysis.” *See Ecology Ctr.*, 430 F.3d at 1064 (quoting *Lands Council I*, 379 F.3d at 752). Thus, our analysis begins with *Lands Council I*.

In *Lands Council I*, we reviewed the Forest Service's approval of a timber harvest as part of a watershed restoration project in the IPNF. 395 F.3d at 1024. The

project was “designed to improve the aquatic, vegetative, and wildlife habitat in the Project area.” *Id.* at 1025. Lands Council challenged that project’s compliance with the NFMA in part because it questioned the reliability of the Forest Service’s scientific methodology underlying its analysis of disturbed soil conditions. *Id.* at 1034.

In analyzing the quality of the soil in the project area, the Forest Service had not taken soil samples from the activity area, but instead had relied on samples from other areas in the forest and on aerial photographs. *Id.* Despite the Forest Service’s representation that it had “tested similar soils within the Forest, and similar soils act the same way,” we rejected the Forest Service’s choice of scientific methodology because it was based entirely on a spreadsheet model with no on-site inspection or verification. *Id.* at 1034-35. We explained that “[u]nder the circumstances of this case, the Forest Service’s basic scientific methodology, to be reliable, required that the hypothesis and prediction of the model be verified with observation. The predictions of the model . . . were not verified with on the ground analysis.” *Id.* at 1035 (emphasis added). We then held that the “Forest Service’s reliance on the spreadsheet models, unaccompanied by on-site spot verification of the model’s predictions, violated NFMA.” *Id.*

In *Ecology Center*, we applied an on-the-ground analysis requirement to our review of the Lolo National Forest Post Burn Project, in which the Forest Service proposed logging in old-growth forest and post-fire habitats. 430 F.3d at 1060. We held that in order to comply with the NFMA, the Forest Service was required to conduct on-the-ground analysis to verify its soil quality analysis and to establish the reliability of its hypothesis that “treating old-growth forest is beneficial to dependent species.” *Id.* at 1064, 1070-71.

Ecology Center even suggests that such an analysis must be on-site, meaning *in the location of the proposed action*. There, we rejected the Forest Service’s argument that its on-the-ground soil analysis was “sufficiently reliable because it utilized data from areas with ecological characteristics similar to the proposed harvest units.” *Id.* at 1070. We noted that, as in *Lands Council I*, the Forest Service had not tested “much of *the activity area*.” *Id.* (quoting *Lands Council I*, 395 F.3d at 1034) (emphasis added); *see also Wildwest Inst. v. Bull*, 472 F.3d 587, 591-92 (9th Cir. 2006) (distinguishing *Ecology Center* because the Forest Service relied on on-site analysis in developing its proposal). *But see Ecology Ctr.*, 430 F.3d at 1064 (noting that the Forest Service did not conduct on-the-ground analysis “despite the fact that it has already treated old-growth forest elsewhere and therefore had the opportunity to do so”).

We made three key errors in *Ecology Center*. First, we read the holding of *Lands Council I* too broadly. Second, we created a requirement not found in any relevant statute or regulation. And, third, we defied well-established law concerning the deference we owe to agencies and their methodological choices. Today, we correct those errors.

In *Lands Council I*, we expressly limited our holding that “on-site spot verification” was required for soil analysis to “the circumstances of [that] case.” 395 F.3d at 1036. But in *Ecology Center*, we expanded the on-the-ground analysis requirement beyond the facts of *Lands Council I*, and even beyond the context of soil analysis. In holding that the Forest Service violated the NFMA by not verifying its hypothesis that treating old-growth forest is beneficial to dependent species with on-the-ground analysis, *Ecology Center* established a far-reaching rule that the Forest Service must always verify its methodology with on-the-ground analysis, regardless of the context. 430 F.3d at 1064. We accept the description in *Lands Council I* that it was “limited to the circumstances of [that] case,” and hold that it does not impose a categorical requirement of on-the-ground analysis or observation for soil analysis, or any other type of analysis.

The Forest Service is at liberty, of course, to use on-the-ground analysis if it deems it appropriate or necessary, but it is not required to do so. As Judge McKeown

explained in her dissent in *Ecology Center*, “there is no legal basis to conclude that the NFMA requires an on-site analysis where there is a reasonable scientific basis to uphold the legitimacy of modeling. NFMA does not impose this substantive requirement, and it cannot be derived from the procedural parameters of NEPA.” 430 F.3d at 1073 (McKeown, J., dissenting); *see also Inland Empire Pub. Lands Council*, 88 F.3d at 758 (noting that NEPA imposes only procedural requirements on federal agencies).

The NFMA unquestionably requires the Forest Service to “provide for diversity of plant and animal communities . . . in order to meet overall multiple-use objectives.” 16 U.S.C. § 1604(g)(3)(B). Similarly, the IPNF Forest Plan requires the Forest Service to “[m]anage the habitat of species listed in the Regional Sensitive Species List to prevent further declines in populations which could lead to federal listing under the Endangered Species Act.” IPNF Forest Plan, *supra*, at II-28. However, despite imposing these substantive requirements on the Forest Service, neither the NFMA and

its regulations⁶ nor the IPNF Forest Plan specify precisely how the Forest Service must demonstrate that its site-specific plans adequately provide for wildlife viability.

Granting the Forest Service the latitude to decide how best to demonstrate that its plans will provide for wildlife viability comports with our reluctance to require an agency to show us, by any particular means, that it has met the requirements of the NFMA every time it proposes action. We have approved of forest plans when they are “based on the current state of scientific knowledge.” *See Seattle Audubon Soc’y v. Moseley*, 80 F.3d 1401, 1404 (9th Cir. 1996). *Moseley* upheld a plan to manage old-growth forest after the plan was challenged on the grounds that the Forest Service did not adequately account for the northern spotted owl’s habitat. *Id.* We stated:

Here, the record demonstrates that the federal defendants considered the viability of plant and animal populations based on the current state of

⁶Even if 36 C.F.R. § 219.19 is applicable to the Project because it was explicitly incorporated into the SFEIS and ROD, *see supra* n. 5, the transitional rule in effect until April 21, 2008 stated that for plans developed “using the provisions of the planning rule in effect prior to November 9, 2000,” which would include 36 C.F.R. § 219.19, “the Responsible Official may comply with any obligations relating to [MIS] by considering data and analysis relating to habitat unless *the plan specifically requires population monitoring or population surveys for the species. Site-specific monitoring or surveying or a proposed project or activity area is not required, but may be conducted at the discretion of the Responsible official.*” 36 C.F.R. § 219.14 (2007) (emphasis added). The Forest Service did not designate the flammulated owl as an MIS and, in any case, Lands Council does not argue that any language in the IPNF Forest Plan or the Project itself imposed a requirement for site-specific monitoring.

scientific knowledge. Because of the inherent flexibility of the NFMA, and because there is no showing that the federal defendants overlooked any relevant factors or made any clear errors of judgment, we conclude that their interpretation and application of the NFMA's viability regulations was reasonable.

Id. (citations omitted). Thus, we defer to the Forest Service as to what evidence is, or is not, necessary to support wildlife viability analyses.

Were we to grant less deference to the agency, we would be ignoring the APA's arbitrary and capricious standard of review. *Ecology Center* illustrates the consequences of failing to grant appropriate deference to an agency. In *Ecology Center*, we rejected reports establishing that soil analysis was conducted in the project area as "too few and of poor quality." *See* 430 F.3d at 1073 (McKeown, J., dissenting). We stated, "[t]he record provides little information that enables us to assess the reliability or significance of these reports; for example, we do not know the qualifications of the person conducting the field review, the methodology utilized, or whether the field observations confirmed or contradicted the Service's estimates." *Id.* at 1070 (majority opinion). Essentially, we assessed the quality and detail of on-site analysis and made "fine-grained judgments of its worth." *Id.* at 1077 (McKeown, J., dissenting). It is not our proper role to conduct such an assessment.

Instead, our proper role is simply to ensure that the Forest Service made no “clear error of judgment” that would render its action “arbitrary and capricious.” *See Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 378 (1989); *see also Ecology Ctr.*, 430 F.3d at 1075 (McKeown, J., dissenting) (noting that *Lands Council I* did not demand that we “assess the sufficiency of the Forest Service’s on-site soil quality analysis beyond the traditional arbitrary and capricious standard; it only asks us to verify that there is such an on-site sampling”). To do so, we look to the evidence the Forest Service has provided to support its conclusions, along with other materials in the record, to ensure that the Service has not, for instance, “relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or [an explanation that] is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs. Assn., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); *see Lands Council I*, 395 F.3d at 1026.

This approach respects our law that requires us to defer to an agency’s determination in an area involving a “high level of technical expertise.” *See Selkirk Conservation Alliance v. Forsgren*, 336 F.3d 944, 954 (9th Cir. 2003) (quoting *Marsh*, 490 U.S. at 377-78). We are to be “most deferential” when the agency is “making

predictions, within its [area of] special expertise, at the frontiers of science.” *Forest Guardians v. U.S. Forest Serv.*, 329 F.3d 1089, 1099 (9th Cir. 2003) (citations omitted). A number of our sister circuits agree that we are to conduct a “particularly deferential review” of an “agency’s predictive judgments about areas that are within the agency’s field of discretion and expertise . . . as long as they are reasonable.” *Earthlink, Inc. v. FCC*, 462 F.3d 1, 12 (D.C. Cir. 2006) (quoting *FCC v. WNCN Listeners Guild*, 450 U.S. 582, 594 (1981)); see *Cellnet Commc’ns, Inc. v. FCC*, 149 F.3d 429, 441 (6th Cir. 1998); *W. Fuels-Ill., Inc. v. ICC*, 878 F.2d 1025, 1030 (7th Cir. 1989).

Finally, this approach also acknowledges that “[w]e are not free to ‘impose on the agency [our] own notion of which procedures are ‘best’ or most likely to further some vague, undefined public good.’” *Churchill County v. Norton*, 276 F.3d 1060, 1072 (9th Cir. 2001) (alteration in original) (quoting *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 549 (1978)). Nor may we impose “procedural requirements [not] explicitly enumerated in the pertinent statutes.” *Wilderness Soc’y v. Tyrrel*, 918 F.2d 813, 818 (9th Cir. 1990).

Thus, as non-scientists, we decline to impose bright-line rules on the Forest Service regarding particular means that it must take in every case to show us that it has met the NFMA’s requirements. Rather, we hold that the Forest Service must

support its conclusions that a project meets the requirements of the NFMA and relevant Forest Plan with studies that the agency, in its expertise, deems reliable. The Forest Service must explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable. We will conclude that the Forest Service acts arbitrarily and capriciously only when the record plainly demonstrates that the Forest Service made a clear error in judgment in concluding that a project meets the requirements of the NFMA and relevant Forest Plan.

For these reasons, we overrule *Ecology Center* and affirm that *Lands Council I*'s requirement of on-the ground analysis was limited to the circumstances of that particular case.

3. Reliability of the Forest Service's Analysis Concerning The Effects Of Treating Old-Growth Habitat On The Flammulated Owl

Lands Council argues that the Forest Service violated the NFMA by failing to demonstrate the reliability of the scientific methodology underlying its analysis of the Project's effect on wildlife, specifically the flammulated owl and its habitat. But the Forest Service supported its conclusions about the impact of the Project on the flammulated owl and its habitat with studies it deemed reliable. Moreover, the Forest

Service did conduct on-the-ground analysis of the flammulated owl in an area straddled by the Mission Brush Project Area, even though, by overruling *Ecology Center*, this opinion confirms that such analysis is not required. *See supra* Part III.A.2.

These studies, together with the Forest Service’s reasonable assumption that enhancing the amount of flammulated owl habitat in the long-term will maintain the flammulated owl population, lead us to conclude that the Forest Service did not act arbitrarily and capriciously in determining that the Project met the substantive requirements of the NFMA and the IPNF Forest Plan regarding species diversity. *See Inland Empire Pub. Lands Council*, 88 F.3d at 760 (“In deference to an agency’s expertise, we review its interpretation of its own regulations solely to see whether that interpretation is arbitrary and capricious This is especially true when questions of scientific methodology are involved.”) (citations omitted). Accordingly, we conclude that the district court did not abuse its discretion when it decided that Lands Council is not likely to succeed on this aspect of its NFMA claim.

The Forest Service has provided studies evidencing that flammulated owls prefer old-growth habitat. *See Montana Partners in Flight, Bird Conservation Plan–Flammulated Owl* (2001) [hereinafter *Montana Partners*], at 2 (noting “a strong association between Flammulated Owls and old-growth ponderosa-pine/Douglas-fir

habitat”); Idaho Partners in Flight, *Idaho Bird Conservation Plan-Version 1.0; Implementation Schedule* (2000), at 144 (“Old-growth trees are strongly correlated with nesting, singing, and foraging sites [of flammulated owls].”); R. Reynolds & B. Linkhart, *Flammulated Owls in Ponderosa Pine: Evidence of Preference for Old Growth* (1992), at 167 (“[Flammulated] owls settled into areas having greater proportions of old-growth ponderosa pine/Douglas-fir.”).

The Forest Service has also provided studies supporting its determination that the Project will maintain flammulated owl habitat because flammulated owls live in old-growth habitat post-treatment. One study on the habitat selection of flammulated owls in British Columbia notes that “most [flammulated] owls were found in mature-old (100-200 yr) growth stands of Douglas fir that had been selectively harvested 20-30 years prior to [the] surveys.” R. Howie & R. Ritcey, *Distribution, Habitat Selection, and Densities of Flammulated Owls in British Columbia* (1987), at 251. While the study does not conclude that logging *improves* flammulated owl habitat, it documents flammulated owl presence within logged old-growth stands.⁷ Other studies document this presence as well. *See* Montana Partners, *supra*, at 3 (acknowledging

⁷Lands Council’s briefs repeatedly suggest that the Forest Service must *improve* wildlife habitat but, as our discussion of the NFMA and the IPNF Forest Plan makes clear, neither the NFMA nor the IPNF Forest Plan require the Forest Service to establish that its plans will improve the habitat of a particular species.

presence of flammulated owls in selectively logged sites in the Northern Rockies and stating that “[t]he Forest Service has an opportunity to manage restored acres to meet both the microhabitat and landscape parameters of identified wildlife species, including the Flammulated Owl”).

Moreover, although it was not required to, the Forest Service conducted an on-the-ground analysis of flammulated owls in the Bonners Ferry Ranger district within the IPNF. *Dawson Ridge Flammulated Owl Habitat Monitoring* (June 30, 2006). The Dawson Ridge study monitored five 1/5 acre plots of flammulated owl habitat in an area that was treated with thinning and underburning in the mid-1970s, logged in 2000, and underburned in 2002. *Id.* at 1, 3. The researchers received one flammulated owl response in the 2006 survey, and recorded additional responses in 1999 and 2000. *Id.* at 1. It is within the Forest Service’s expertise, not ours, to determine the significance of these responses.

Although we acknowledge that this record is relatively sparse and approaches the limits of our deference, we nevertheless conclude that there is sufficient evidence to defer to the Forest Service’s conclusion that this survey response indicates that flammulated owls are using the monitored area. To determine whether deference is warranted, we look to the sufficiency of the evidence, not the size of the record. The

Dawson Ridge study concluded that “[m]onitoring surveys confirm that owls are using the area after harvest,” and stated:

Although it is inappropriate at this time to assume that any of these silvicultural treatments improved (i.e., changed habitat from an unsuitable to suitable condition) flammulated owl habitat[,] it is encouraging given the management history of Dawson Ridge that owls are using the area. However, these positive responses do imply that our dry forest silvicultural practices are at least *maintaining* suitable habitat.

Id. at 3 (emphasis in original). Of course, neither the NFMA nor the IPNF Forest Plan require the Forest Service to *improve* a species’ habitat to prove that it is maintaining wildlife viability.⁸

Finally, the Forest Service used a habitat suitability model to analyze the potential effects of the proposed Project on the flammulated owl. Studies in the record reference the required size and continuity of habitat that the owls need to survive. The

⁸Lands Council observes that the Forest Service has conducted other surveys in the Project Area and has failed to locate any flammulated owls. While it is true that these studies did not record the presence of flammulated owls, nothing in the SFEIS suggests that these particular surveys were performed to determine if flammulated owls occupy treated old-growth habitat. Rather, the SFEIS is clear that these studies were performed when the Forest Service was examining suitable habitat for the flammulated owls. Contrary to Lands Council’s suggestion, we cannot infer from these studies anything about the impact of the proposed Project on flammulated owls.

habitat suitability model predicted the change in suitable habitat⁹ that would result from the treatment proposed in each of the Forest Service's alternatives for the Project. The Forest Service explained its methodology for calculating the amount of habitat that would be suitable for the flammulated owl after the treatment. The Forest Service used vegetation characteristics to determine stands that were currently suitable habitat for flammulated owl, and wildlife biologists conducted site visits and interpreted aerial photographs to determine the suitability of stands deemed "capable."

Based on its analysis, the Forest Service concluded that, though the disturbance imposed by the Project may have short-term negative impacts in the immediate vicinity of harvesting, there would be no decrease in suitable habitat in the short-term, and the Project "would promote the long-term viability of suitable Flammulated Owl habitat." The Forest Service also concluded that the Project's effects "would not indicate local or regional change in habitat quality or population status, allowing Flammulated Owls to maintain their current distribution," and that it would not contribute to a trend toward a "Federal listing" under the Endangered Species Act or cause a loss of viability.

⁹The SFEIS defines "suitable habitat" as habitat "that currently has both fixed and variable stand attributes for a given species' habitat requirements." This differs from "capable habitat," which refers to a site's "inherent potential . . . to produce essential habitat requirements of a species" though the site does not currently have all that a species requires.

Today, as we have in the past, we approve, based on the record before us, of the Forest Service's use of the amount of suitable habitat for a particular species as a proxy for the viability of that species. *See, e.g., Inland Empire Pub. Lands Council*, 88 F.3d at 761. We therefore find "eminently reasonable" the Forest Service's conclusion that the Project will maintain a viable population of flammulated owls because it will not decrease suitable flammulated owl habitat in the short-term and will promote the long-term viability of suitable flammulated owl habitat. *See id.*

In *Inland Empire Public Lands Council*, the plaintiffs challenged the Forest Service's analysis of a timber sales project's impact on seven sensitive species in the Kootenai National Forest. *Id.* at 757. The plaintiffs, several environmental groups, claimed that the Forest Service did not satisfy the NFMA because its population viability analysis was insufficient to ensure viable populations of the relevant species. *Id.* at 759-60. We approved of the Forest Service's "habitat viability analysis," which measured the amount of suitable habitat for the species at issue and then used that figure as a proxy to estimate a species' population. *Id.* at 763. Using this "habitat as a proxy approach," the Forest Service concluded that a species would remain viable on the basis of whether "the threshold percentage of each type of habitat remaining in the chosen alternative [after harvesting] was greater than the percentage required

for that species to survive.” *Id.* at 759.¹⁰ We characterized the Forest Service’s assumption that maintaining acreage necessary for survival would ensure a species’ survival as “eminently reasonable” and deferred to the Forest Service’s methodology. *See id.* at 760-61.¹¹

To always require a particular type of proof that a project would maintain a species’ population in a specific area would inhibit the Forest Service from conducting projects in the National Forests. We decline to constrain the Forest Service in this fashion. Were we to do so, we may well be complicit in frustrating one or more of the

¹⁰We have also allowed the Forest Service to use habitat as a proxy to measure a species’ population, and then to use that species’ population as a proxy for the population of other species (proxy-on-proxy approach). *See Env’tl. Prot. Info. Ctr.*, 451 F.3d at 1017.

¹¹Some of our sister circuits have been skeptical when the Forest Service has relied only on habitat analyses to satisfy its requirements under 36 C.F.R. § 219.19. *Compare Inland Empire Pub. Lands Council*, 88 F.3d at 763, and *Ind. Forest Alliance, Inc. v. U.S. Forest Serv.*, 325 F.3d 851, 863 (7th Cir. 2003) (upholding the Forest Service’s use of data on habitat availability to approximate the population of MIS instead of “going into the field and actually counting all of the birds” and noting that none of the relevant regulatory sources imposed a specific methodology on the Forest Service for ensuring species diversity), with *Sierra Club v. Martin*, 168 F.3d 1, 4-7 & n.10 (11th Cir. 1999) (rejecting *Inland Empire* and concluding that the Forest Service violated the NFMA by using habitat information as a proxy for viability when the Forest Plan specifically required population data and the Forest Service had not collected any information on many sensitive species in the project area), and *Utah Env’tl. Cong. v. Bosworth*, 372 F.3d 1219, 1225-26 (10th Cir. 2004) (holding that 36 C.F.R. § 219.19 requires population data to establish viability of an MIS).

other objectives the Forest Service must also try to achieve as it manages National Forest System lands. *See* 16 U.S.C. § 528 (noting Congress’ policy that the National Forests are to be “administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes”).

The case before us resembles *Inland Empire*. As explained, the record includes studies describing the quality and quantity of habitat necessary to sustain the viability of flammulated owls, and the Forest Service has determined what habitat is currently suitable for the flammulated owl and what habitat would be suitable after the proposed project. While the project involves a disturbance in the forest to some extent, it is for the Forest Service to determine how the Project will affect the habitat of flammulated owls. In this case, the Forest Service has concluded that the current amount of suitable habitat will be maintained and that flammulated owls will be able to maintain their current distribution. That a proposed project involves some disturbance to the forest does not prohibit the Forest Service from assuming that maintaining a sufficient amount of suitable habitat will maintain a species’ viability. Indeed, the project in *Inland Empire* involved a plan to harvest trees, and that disturbance did not render the habitat as a proxy approach inapplicable. 88 F.3d at 759.

To the extent we suggested in *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146 (9th Cir. 1998), that habitat cannot be used as a proxy when there is an

“appreciable habitat disturbance,” *id.* at 1154, *Thomas* is overruled. A habitat disturbance does not necessarily mean that a species’ viability will be threatened. Thus, a planned disturbance to a habitat does not preclude the Forest Service from using the habitat as a proxy approach to establish a species’ viability when the disturbance does not reduce the suitable habitat so as to threaten that species’ viability.

Of course, a reviewing court still must ensure that the Forest Service’s use of “habitat as a proxy” is not arbitrary and capricious. We therefore hold that when the Forest Service decides, in its expertise, that habitat is a reliable proxy for species’ viability in a particular case, the Forest Service nevertheless must both describe the quantity and quality of habitat that is necessary to sustain the viability of the species in question and explain its methodology for measuring this habitat. *See Earth Island Institute II*, 442 F.3d at 1175 (rejecting the use of habitat as a proxy, in relevant part, because there was “no indication of the methodology used in determining what constitutes suitable habitat”); *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1250 (9th Cir. 2005) (“Our case law permits the Forest Service to meet the wildlife species viability requirements by preserving habitat, but only where both the Forest Service’s knowledge of what quality and quantity of habitat is necessary to support the species and the Forest Service’s method for measuring the existing amount of that habitat are reasonably reliable and accurate.”); *Inland Empire*, 88 F.3d at 762

(holding the Forest Service did not need to engage “in a more extended analysis of the owl’s nesting and feeding habitat requirements because such data were unavailable”). We will defer to its decision to use habitat as a proxy unless the Forest Service makes a “clear error of judgment” that renders its decision arbitrary and capricious. *See Marsh*, 490 U.S. at 378 (describing arbitrary and capricious review).

Though some of our cases limit the use of habitat as a proxy, *see, e.g., Oregon Natural Resources Council Fund v. Goodman*, 505 F.3d 884, 891 (9th Cir. 2007) and *Rittenhouse*, 305 F.3d at 972-73, these cases do not reject the habitat as a proxy approach. Rather, these cases reasonably limited the Forest Service when, based on the particular facts before the court, the use of habitat as a proxy was arbitrary and capricious. *See Rittenhouse*, 305 F.3d at 972-73 (“We hold that *under the facts of this case*, the Forest Service’s use of habitat as proxy . . . was arbitrary and capricious.”) (emphasis added). Thus, our cases are instructive that the Forest Service’s use of habitat as a proxy may be arbitrary and capricious if, for example, the EIS states that the relationship between the species at issue and the habitat is unclear, *see Oregon Natural Resources Council Fund*, 505 F.3d at 891, the record fails to describe the type or amount of habitat that is necessary to sustain the viability of the species in question, *cf. Native Ecosystems Council*, 428 F.3d at 1250, or the record indicates that the

Forest Service based its habitat calculations on outdated or inaccurate information, *see Lands Council I*, 395 F.3d at 1036; *Rittenhouse*, 305 F.3d at 971-72.

As explained, in this case, the Forest Service detailed the methodology it used for determining the amount of suitable habitat and acknowledged the assumptions underlying its use of habitat as a proxy. Although it is true that no flammulated owls were located in suitable habitat in a number of presence surveys, the Forest Service acknowledges that the nesting boxes used may have been placed too low on trees in some of these surveys. Moreover, the Forest Service has represented that it is difficult to detect flammulated owls, and we recognize that “monitoring difficulties do not render a habitat-based analysis unreasonable, so long as the analysis uses all the scientific data currently available.” *See Env'tl. Prot. Info. Ctr.*, 451 F.3d at 1018 (citing *Inland Empire Pub. Lands Council*, 88 F.3d at 762).

In light of the discussion above, the rule we set forth in *Native Ecosystems Council* remains good law: the Forest Service may meet wildlife “viability requirements by preserving habitat, but only where both the Forest Service’s knowledge of what quality and quantity of habitat is necessary to support the species and the Forest Service’s method for measuring the existing amount of that habitat are reasonably reliable and accurate.” 428 F.3d at 1250. But we construe the phrase “preserving habitat” broadly so as to include not only those projects where the Forest

Service is increasing or preserving the same amount of suitable habitat but also those projects where the Forest Service is maintaining a sufficient amount of suitable habitat to support a species' viability, even if its plans will disturb some suitable habitat.

On the basis of the studies provided by the Forest Service and the Forest Service's reasonable assumption that maintaining suitable habitat for the flammulated owl will also maintain a viable population of flammulated owls, we conclude that the district court did not abuse its discretion in deciding that Lands Council is not likely to succeed on this aspect of its NFMA claim.

4. Forest Service's Compliance With Standard 10(b) Of The IPNF Forest Plan

The NFMA requires the Forest Service to comply with its established forest plan in all subsequent actions. 16 U.S.C. § 1604(i); *Inland Empire Pub. Lands Council*, 88 F.3d at 757. Standard 10(b) of the IPNF Forest Plan requires the Forest Service to maintain at least ten percent old-growth throughout the forest. Lands Council argues both that the Forest Service will not meet Standard 10(b) after the Project's completion, and also that the IPNF is currently out of compliance with Standard 10(b). These arguments fail.

The Forest Service has shown that it has complied with Standard 10(b), and Lands Council's contentions to the contrary are not supported by reliable evidence.

The Forest Service presented two independent monitoring tools to determine the percentage of old-growth acres in the IPNF, each of which found that the forest contained approximately twelve percent old-growth. The first tool, the National Forest Inventory and Analysis (FIA) program, “provides a congressionally mandated, statistically-based, continuous inventory of the forest resources of the United States.” The program’s design and methods are “scientifically designed, publicly disclosed, and repeatable. . . . There are also stringent quality control standards and procedures.” Using the FIA data, the Forest Services concluded that 11.8 percent of the IPNF is old-growth.

The second tool, the IPNF stand-level old-growth map, found a similar percentage using a method that “was designed and implemented independently from the FIA inventory.” This method utilizes stand information gathered by Forest Service personnel, which is inputted into the Timber Stand Management Record

System (TSMRS) database.¹² Using this database, the Forest Service concluded that 12.1 percent of the IPNF is old-growth.

Lands Council’s argument that the Forest Service is not currently meeting Standard 10(b) is based on its own report. The report, *Lost Forests*, documented the results of a sampling, performed by Lands Council under the direction of a forest pathologist, of 3,000 acres that the Forest Service claimed to be old-growth. The report concluded that seventy percent of the surveyed area did not meet the Forest Service’s own standards for old-growth. The Forest Service’s expert, Dr. Arthur Zack, a forest ecologist, disagreed with the methodology and findings of the report. Dr. Zack found the report “contradictory and unclear about what criteria [it] used for making old growth determinations.” Dr. Zack called the report “not credible” because Lands Council used outdated versions of Forest Service databases and did not use “a representative, non-biased sample design.”

¹²In *Lands Council I*, 395 F.3d at 1036, we found the TSMRS database inaccurate due, in relevant part, to its use of outdated data. Until oral argument before this panel, Lands Council had not contested the reliability of the TSMRS database on appeal. In any case, the SFEIS acknowledges the questions raised in *Lands Council I* and states that since *Lands Council I*, “the Bonners Ferry Ranger District has undertaken an extensive review of all the old growth stands in the Mission Brush Project area.” Indeed, according to Dr. Arthur Zack, the forest ecologist who reviewed Lands Council’s own report on old-growth in the IPNF, it was Lands Council that was “inexplicably using an obsolete version of the Forest Service TSMRS database, even though they knew the IPNF was in the process of updating its old growth data” and had been provided with more recent data.

“When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.” *Marsh*, 490 U.S. at 378. Thus, mindful of the Forest Service’s discretion, we conclude that it did not act arbitrarily and capriciously “in relying on its own data and discounting the alternative evidence offered” by Lands Council. *See Earth Island Inst. I*, 351 F.3d at 1302.

The Forest Service has also established that it will not harvest any old-growth trees as a part of the Project. Despite its plans to perform treatments within old-growth stands, the treatment will not involve harvesting allocated old-growth. The Forest Service represented in the SFEIS that the IPNF has not harvested allocated old-growth for several years, and that its “focus is on maintaining [existing] old growth stands.”

In *Lands Council I*, we held that “[b]ecause no old growth forest is to be harvested under the Project, . . . it cannot be said that the Project itself violates the IPNF Plan’s requirement to maintain ten percent of the forest acreage as old growth forest.” 395 F.3d at 1036. Though we reach the same holding here, we acknowledge, as does the Forest Service, that old-growth percentages may decline due to “disturbances such as fire, insects, [or] pathogens” even if the Forest Service never authorizes harvesting of old-growth in the IPNF. Because the current old-growth

exceeds ten percent, we need not discuss whether the Forest Service has an obligation to preserve mature, not-yet-old-growth trees in order to work toward the required amount of old-growth in the future.

The district court did not abuse its discretion in concluding that Lands Council was not likely to succeed on the merits of this aspect of its NFMA claim.

B. National Environmental Policy Act

1. Statutory Language And Purpose

NEPA, unlike the NFMA, does not impose any substantive requirements on federal agencies—it “exists to ensure a process.” *Inland Empire Pub. Lands Council*, 88 F.3d at 758. NEPA 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 larger [public] audience.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989); *see also* 40 C.F.R. § 1500.1(c) (“The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.”).

To that end, NEPA requires agencies to take a “hard look” at the environmental consequences of their actions by preparing an EIS for each “major Federal action[] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C); *Sierra Club v. Bosworth*, 510 F.3d 1016, 1018 (9th Cir. 2007). The EIS must “provide [a] full and fair discussion of significant environmental impacts” so as to “inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.”

40 C.F.R. § 1502.1. The EIS must include statements 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 of man’s environment and the maintenance 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.

42 U.S.C. § 4332(C). We hold that when the Forest Service provides a full and fair discussion of environmental impacts and its EIS includes these necessary components, the Forest Service has taken the requisite “hard look.”

We have previously faulted the Forest Service for not addressing uncertainties relating to a project “in any meaningful way” in an EIS. *See Seattle Audubon Soc’y v. Espy*, 998 F.2d 699, 704 (9th Cir. 1993) (“The EIS did not address in any

meaningful way the various uncertainties surrounding the scientific evidence upon which the ISC rested.”); *see also Ecology Ctr.*, 430 F.3d at 1065 (stating that the EIS “did not address in any meaningful way” uncertainties regarding the proposed treatment). But none of NEPA’s statutory provisions or regulations requires the Forest Service to affirmatively present every uncertainty in its EIS. Thus, we hold that to the extent our case law suggests that a NEPA violation occurs every time the Forest Service does not affirmatively address an uncertainty in the EIS, we have erred. *See Espy*, 998 F.2d at 704; *see also Ecology Ctr.*, 430 F.3d at 1065. After all, to require the Forest Service to affirmatively present every uncertainty in its EIS would be an onerous requirement, given that experts in every scientific field routinely disagree; such a requirement might inadvertently prevent the Forest Service from acting due to the burden it would impose.

We reaffirm, however, that the Forest Service must acknowledge and respond to comments by outside parties that raise significant scientific uncertainties and reasonably support that such uncertainties exist. This requirement comports with NEPA’s regulations, as well as with interpretations of NEPA offered by the Supreme Court and other circuits. *See, e.g.*, 40 C.F.R. § 1500.1(b) (providing that the agency “must insure that environmental information is available to public officials and citizens” and this “information must be of high quality” as “[a]ccurate scientific

analysis, expert agency comments, and public scrutiny are essential to implementing NEPA”); *id.* § 1502.9(a) (requiring that the agency “make every effort to disclose and discuss at appropriate points in the [EIS] all major points of view on the environmental impacts of the alternatives including the proposed action”); *id.* § 1503.4(a) (stating that “[a]n agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond . . . in the final statement”); *id.* § 1502.22 (providing that “[w]hen an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking”); *Izaak Walton League of Am. v. Marsh*, 655 F.2d 346, 377 (D.C. Cir. 1981) (holding that “[s]o long as the environmental impact statement identifies areas of *uncertainty*, the agency has fulfilled its mission under NEPA”) (emphasis added). The Forest Service does not, however, have the burden to anticipate questions that are not necessary to its analysis, or to respond to uncertainties that are not reasonably supported by any scientific authority.

2. Lands Council’s Contentions That The Forest Service Violated NEPA By Failing To Address Scientific Uncertainty

Lands Council argues that the Project runs afoul of NEPA because the Forest Service “fail[ed] to include a full discussion of the scientific uncertainty surrounding its strategy for maintaining species viability.” Lands Council has not argued that the Forest Service’s SFEIS was deficient in any other respect. We conclude that the Forest Service has satisfied NEPA.

Lands Council first points to two papers it cited in its administrative appeal, one by Pfister et al. and one by Veblen,¹³ to establish that the Project’s strategy of managing old-growth to maintain species viability is controversial. The Forest Service did not fail to conduct a “full and fair discussion” of environmental impacts as NEPA requires by not discussing these articles brought to its attention by Lands Council because they did not raise uncertainties about its methodology. Instead, on the whole, the papers Lands Council cites actually lend support to the Project’s proposed treatment of old-growth habitat.

Though Pfister states that “producing ‘old-growth habitats’ through active management is an untested hypothesis,” he approves of active management in certain circumstances that apply to the Project Area. *See* R.D. Pfister et al., *Contract Review*

¹³The Veblen paper is not a part of the administrative record, and only an excerpt from the Veblen paper is included in Lands Council’s brief. The full text is available at http://www.fs.fed.us/rm/pubs/rmrs_p029.html.

of Old-Growth Management on School Trust Lands: Supplemental Biodiversity Guidance 8/02/00, at 11. Pfister states that “initial restoration cutting treatments appear necessary to restore old-growth stands historically sustained by relatively frequent low- to mixed-intensity fire.” *Id.* at 15. As explained, the Project Area was historically sustained by such fires. Also relevant to the Project Area, Pfister recommends restoration cutting to “reduce unsustainable post-settlement density increases in [old-growth] pine/fir stands.” *Id.*

Veblen questioned whether suppression of naturally occurring forest fires resulted in unnatural fuel buildup, and also stated that this “premise and its implications need to be evaluated by . . . area-specific research” in forests targeted for “fuels or ecological restoration projects.” T.T. Veblen, *Key Issues in Fire Regime Research for Fuels Management and Ecological Fire Restoration* (2003). The Forest Service has done precisely what Veblen advocates—“area-specific research.” The Forest Service conducted “field reconnaissance” in the Project area to obtain area-specific information on the history and intervals of fire. The Forest Service also modeled the fire risk for the Project Area.

Lands Council also contends, more generally, that the Forest Service did not cite adequate evidence that the Project will improve the habitat of old-growth species

and did not adequately examine adverse impacts from logging within old-growth stands. We disagree.

In the SFEIS, the Forest Service discussed how the treatment proposed as a part of the Project would maintain dry-forest, old-growth stands and cited literature explaining that such treatment improves tree vigor and resistance to insects and disease. The Forest Service also modeled the treatment proposed in the different alternatives it considered, which demonstrated that the Project provided the greatest reduction in the risk of stand-replacing fires, thereby benefitting old-growth habitat. Also, Lands Council claims to have submitted a comment stating that the Forest Service did not cite “any evidence that its managing for old growth habitat strategy will improve old growth species habitat over the short-term or long-term.” The Forest Service responded, again with citations to literature, by stating that the Project’s proposed treatment would return the Project Area to old-growth and, in turn, improve tree vigor.

The Forest Service did not ignore that there may be some adverse impact from logging in old-growth stands. The Forest Service acknowledged possible short-term, negative impacts in the immediate vicinity of harvest units for the flammulated owl. But the Forest Service explained, based on its habitat suitability model, that its actions would not decrease suitable habitat in the short-term and would enhance it in the long-

term. Finally, as we have already explained, we allow the Forest Service to use habitat as a proxy when the Forest Service concludes, in its expertise, that it is reasonable to assume that a project will maintain a species' viability if the project will maintain suitable habitat for the species. Though the Forest Service must explain the methodology it used for its habitat suitability analysis, which the Forest Service did here, NEPA does not require us to "decide whether an [EIS] is based on the best scientific methodology available." *See Friends of Endangered Species, Inc. v. Jantzen*, 760 F.2d 976, 986 (9th Cir. 1985) (citations omitted). And, we will not find a NEPA violation based on the Forest Service's use of an assumption that we approve.

We conclude that the Forest Service took the requisite "hard look" at the environmental impacts of the Project to satisfy NEPA. Thus, the district court did not abuse its discretion in concluding that Lands Council is unlikely to succeed on the merits of its NEPA claim.

C. Injunctive Relief

"A preliminary injunction is appropriate when a plaintiff demonstrates 'either: (1) a likelihood of success on the merits and the possibility of irreparable injury; or (2) that serious questions going to the merits were raised and the balance of hardships tips sharply in [the plaintiff's] favor.'" *Lands Council II*, 479 F.3d at 639 (quoting

Clear Channel Outdoor Inc., 340 F.3d at 813). We concluded above that Lands Council is not likely to succeed on the merits of its claims under the NFMA or NEPA. Assuming that Lands Council has at least raised “serious questions going to the merits,” which is in some doubt given our discussion above, Lands Council is entitled to a preliminary injunction only if the balance of hardships tips sharply in its favor. *See id.* (“[T]he less certain the district court is of the likelihood of success on the merits, the more plaintiffs must convince the district court that the public interest and balance of hardships tip in their favor.” (quoting *Sw. Voter Registration Educ. Project*, 344 F.3d at 918)); *Earth Island Inst. I*, 351 F.3d at 1298 (noting that the burden of proof is on the plaintiff to show it is entitled to a preliminary injunction). In addition to balancing the hardships to the parties, we also must take into account the public’s interest. *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1125 (9th Cir. 2002); *Sammartano v. First Judicial Dist. Court*, 303 F.3d 959, 974 (9th Cir. 2002). We conclude that the district court did not abuse its discretion in denying Lands Council a preliminary injunction.¹⁴

¹⁴Even though Lands Council expressed concern only about the 277 acres of old-growth habitat in the Project Area at oral argument, Lands Council seeks to enjoin the entire project without regard for the multiple-use objectives the Project seeks to promote.

As a threshold matter, a district court abuses its discretion if it “base[s] its decision on an erroneous legal standard or clearly erroneous findings of fact.” *Earth Island Inst. II*, 442 F.3d at 1156; *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 422 F.3d 782, 793 (9th Cir. 2005) (stating that we reverse a district court’s order regarding preliminary injunctive relief “only if . . . the district court ‘based its decision on an erroneous legal standard or on clearly erroneous findings of fact’” (quoting *United States v. Peninsula Commc’ns, Inc.*, 287 F.3d 832, 839 (9th Cir. 2002) (emphasis added))). Under this standard, “[a]s long as the district court got the law right, it will not be reversed simply because the appellate court would have arrived at a different result if it had applied the law to the facts of the case.” *Earth Island Inst. II*, 442 F.3d at 1156 (quoting *Earth Island Inst. I*, 351 F.3d at 1298).

Here, the district court applied the correct preliminary injunction standard and concluded that Lands Council established neither a fair chance of success on the merits nor the existence of serious questions going to the merits. The district court noted that Lands Council did not point to irreparable harm “beyond the general allegation that environmental harm is irreparable,” and refused to “presume that in all environmental cases that irreparable harm will outweigh all other considerations.” Importantly, Lands Council has not argued that the district court applied an incorrect

legal standard or made clearly erroneous findings of fact in denying its request for a preliminary injunction.

We also agree with the district court that Lands Council has not shown that “the balance of hardships tips sharply in its favor.” *See Lands Council II*, 479 F.3d at 639. In balancing the harms, we must weigh the environmental injuries invoked by Lands Council against the other injuries identified by the Forest Service and Intervenors. In Lands Council’s view, the environmental injuries are the loss of trees and risk to the flammulated owl; the other injuries cited by the Forest Service and Intervenors are economic losses—particularly the loss of jobs and harm to the local economy—and the risks from no action, including catastrophic fire, insect infestation, and disease.

Turning first to the significance of environmental injury, the Supreme Court has instructed us that “[e]nvironmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to protect the environment.” *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 545 (1987). But the Supreme Court has not established that, as a rule, any potential environmental injury merits an injunction. Indeed, in *Amoco Production Company*, the Supreme Court concluded that economic concerns—the loss of \$70 million that an oil company had committed to

exploration—outweighed environmental concerns when the claimed injury to subsistence resources from exploration “was not at all probable.” *Id.* at 545.

Consistent with *Amoco Production Company*, we have held that the public interest in preserving nature and avoiding irreparable environmental injury outweighs economic concerns in cases where plaintiffs were likely to succeed on the merits of their underlying claim, *see Earth Island Inst. II*, 442 F.3d at 1177; *Earth Island Inst. I*, 351 F.3d at 1308-09 (noting the long-term environmental consequences of logging). For example, in *National Parks & Conservation Association v. Babbitt*, 241 F.3d 722, 738 (9th Cir. 2001), we held that a cruise ship’s “loss of anticipated revenues . . . does not outweigh the potential irreparable damage to the environment.”

Our law does not, however, allow us to abandon a balance of harms analysis just because a potential environmental injury is at issue. *See Forest Conservation Council v. U.S. Forest Serv.*, 66 F.3d 1489, 1496 (9th Cir. 1995) (“Injunctive relief is an equitable remedy, requiring the court to engage in the traditional balance of harms analysis, even in the context of environmental litigation.”) (citation omitted). Indeed, the Supreme Court has instructed us not to “exercise [our] equitable powers loosely or casually whenever a claim of ‘environmental damage’ is asserted.” *Aberdeen & Rockfish R. Co. v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 409 U.S. 1207, 1217-18 (1972); *see Weinberger v. Romero-Barcelo*, 456

U.S. 305, 313 (1982) (“The grant of jurisdiction to ensure compliance with a statute hardly suggests an absolute duty to do so under any and all circumstances, and a federal judge sitting as chancellor is not mechanically obligated to grant an injunction for every violation of law.”). Accordingly, we decline to adopt a rule that *any* potential environmental injury *automatically* merits an injunction, particularly where, as in this case, we have determined that the plaintiffs are not likely to succeed on the merits of their claims.

Intervenors raise hardships that must be balanced against Lands Council’s claims of potential environmental injury. Intervenors contend that enjoining the project will force the timber companies that purchased the Sales to lay off some or all of their twenty-seven workers, in addition to other indirect harm to the struggling local economy. We must also consider the public’s interest. *See Kootenai Tribe of Idaho*, 313 F.3d at 1125; *Sammartano*, 303 F.3d at 974. Though preserving environmental resources is certainly in the public’s interest, the Project benefits the public’s interest in a variety of other ways. According to the Forest Service, the Project will decrease the risk of catastrophic fire, insect infestation, and disease, and further the public’s interest in aiding the struggling local economy and preventing job loss. *See Wildwest Inst.*, 472 F.3d at 592 (considering the possibility of a severe wildfire and its accompanying danger to human life, and the money the Forest Service would lose in

revenue from timber sales as hardships favoring the denial of an injunction). The court did not clearly error in concluding that the balance of harms did not tip sharply in Lands Council's favor.

We conclude that the district court did not abuse its discretion in denying Lands Council's request for a preliminary injunction.

CONCLUSION

For the reasons explained above, we conclude that Lands Council was not likely to succeed on any of its claims under the NFMA or NEPA. We also conclude that Lands Council has not shown that, if we allow the Forest Service to proceed with the Mission Brush Project, the balance of hardships tips sharply in its favor. The district court's denial of Lands Council's request for a preliminary injunction is **AFFIRMED.**

COUNSEL

Karen Lindholdt, University Legal Assistance, Spokane, Washington; Thomas J. Woodbury, Forest Defense, P.C., Missoula, Montana, for the Plaintiffs-Appellants.

Andrew C. Mergen and Thomas W. Swegle, United States Department of Justice, Washington, D.C., for Defendant-Appellee.

Scott W. Horngren, Haglund Kelley Jones & Wilder LLP, Portland, Oregon, for Defendant-Intervenors-Appellees.