

FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

THE LANDS COUNCIL, a Washington nonprofit corporation; OREGON WILD, an Oregon nonprofit corporation; HELLS CANYON PRESERVATION COUNCIL, an Oregon nonprofit corporation, and SIERRA CLUB, a California corporation,
Plaintiffs-Appellants,

v.

KEVIN MARTIN, Forest Supervisor of the Umatilla National Forest U.S. Forest Service, and the UNITED STATES FOREST SERVICE, an agency of the United States Department of Agriculture,
Defendants-Appellees,

and

AMERICAN FOREST RESOURCE COUNCIL, an Oregon corporation; BOISE BUILDING SOLUTIONS MANUFACTURING, L.L.C., a Washington limited liability company; DODGE LOGGING, INC., an Oregon corporation,
Defendants-Intervenors-Appellees.

No. 07-35804
D.C. No.
CV-06-00229-LRS
OPINION

Appeal from the United States District Court
for the Eastern District of Washington
Lonny R. Suko, District Judge, Presiding

Argued and Submitted
March 11, 2008—Portland, Oregon

Filed June 25, 2008

Before: Susan P. Graber, Richard A. Paez, and
Carlos T. Bea, Circuit Judges.

Opinion by Judge Graber

COUNSEL

Ralph O. Bloemers, Crag Law Center, Portland, Oregon, for the plaintiffs-appellants.

David C. Shilton, United States Department of Justice, Environment & Natural Resources Division, Washington, D.C., for the defendants-appellees.

Scott W. Horngren, Haglund Kelley Horngren Jones & Wilder, LLP, Portland, Oregon, for the defendants-intervenors-appellees.

OPINION

GRABER, Circuit Judge:

A forest fire burned thousands of acres of national forest in southeastern Washington, the United States Forest Service initiated a salvage logging operation, and we are called upon to determine whether the Forest Service took the requisite “hard look” under the National Environmental Policy Act of

1969 (“NEPA”), 42 U.S.C. §§ 4321-4370, and whether it complied with the National Forest Management Act of 1976 (“NFMA”), 16 U.S.C. §§ 1600-1614.

Plaintiffs The Lands Council, Oregon Wild, Hells Canyon Preservation Council, and Sierra Club, which are environmental organizations, appeal the district court’s grant of summary judgment to Defendants United States Forest Service and the Forest Supervisor of the Umatilla National Forest. American Forest Resource Council, Boise Building Solutions Manufacturing, L.L.C., and Dodge Logging, Inc., which are a forestry advocacy organization and logging companies, join Defendants as intervenors. We hold that the Forest Service failed to include an adequate discussion of the effects of proposed logging on two significant roadless areas. We otherwise affirm.

FACTUAL AND PROCEDURAL HISTORY

In August 2005, a forest fire named the “School Fire” burned approximately 51,000 acres in southeastern Washington, including 28,000 acres of the Umatilla National Forest. Soon thereafter, the Forest Service began preparations for the School Fire Salvage Recovery Project, to harvest trees located within the burned areas of National Forest lands. After two rounds of public comments, the Forest Service released the final Environmental Impact Statement (“EIS”) and issued a record of decision.

The Forest Service chose the alternative in the EIS that permitted salvage logging on 9,423 acres. None of the proposed logging would occur on land designated as an inventoried roadless area.¹ The proposed logging would occur, however,

¹Large areas of land without roads, called “roadless areas,” have been the subject of congressional and executive study. In the 1970s, the federal government undertook a comprehensive cataloguing effort of roadless areas that resulted in the designation of many roadless areas as “inventoried.” See generally *Nat’l Audubon Soc’y v. U.S. Forest Serv.*, 46 F.3d 1437, 1439-40 (9th Cir. 1993) (describing this history).

on portions of two uninventoried roadless areas, known informally as the West Tucannon roadless area (4,284 acres) and the Upper Cummins Creek roadless area (966 acres). Both of those uninventoried roadless areas lie adjacent to, but on different sides of, the Willow Springs inventoried roadless area (which contains more than 12,000 acres). West Tucannon and Willow Springs are separated by a road. Upper Cummins Creek and Willow Springs are *not* separated by a road; those areas in combination therefore comprise a contiguous roadless expanse of more than 13,000 acres.

Because trees that are damaged or destroyed by fire depreciate in value quickly, the Forest Service Chief issued an Emergency Situation Determination pursuant to 36 C.F.R. § 215.10 in the summer of 2006. That Determination authorized immediate logging in three designated areas, premised on the prediction that “a delay would result in a potential loss of value of \$1,547,000 to the Federal Government.”

On August 15, 2006, one day after the issuance of the record of decision, Plaintiffs filed suit, alleging violations of NEPA and NFMA. The district court denied Plaintiffs’ motion for a temporary restraining order and preliminary injunction. A divided three-judge panel of this court denied Plaintiffs’ emergency motion for an injunction pending appeal, and a logging operation commenced. This court expedited the appeal and, after hearing oral argument in February 2007, we affirmed in part and reversed in part. *Lands Council v. Martin*, 479 F.3d 636 (9th Cir. 2007) (as amended). We reversed the district court’s denial of a preliminary injunction on Plaintiff’s NFMA claim concerning the Forest Service’s interpretation of the term “live trees” in the Umatilla National Forest Land and Resource Management Plan (“Forest Plan”). *Id.* at 641-43. The term appears in the portion of the Forest Plan known as the “Eastside Screens.”² *Id.* at 641 & n.5. The

²The Eastside Screens are a set of interim riparian, ecosystem, and wildlife standards for timber sales applicable to public lands east of the Cas-

Eastside Screens require that the Forest Service “[m]aintain all remnant late and old seral and/or structural live trees [greater than or equal to] 21” dbh [diameter at breast height] that currently exist within stands proposed for harvest activities.” *Id.* at 641 (emphasis omitted). In short, the Forest Plan prohibits the harvest of old-growth “live trees.”

Plaintiffs argued that the Forest Service’s proposed logging of dying trees violated the Eastside Screens because dying trees are still alive. We agreed:

We apply the common meaning of the term “live trees” because neither the NFMA nor the applicable Forest Plan defines the term. The common understanding of the term “live” is, quite simply, “not dead.” Accordingly, the common meaning of the term “all . . . live trees” is all trees that have not yet died.

. . . Applying this definition, “live trees” will be harvested, which is expressly prohibited by the Eastside Screens.

The Forest Service tries to escape this simple formulation by arguing that the term “live trees” is a technical term understood by foresters to exclude dying trees and that we must defer to its technical expertise. We need not decide whether, in theory, we must employ a technical definition in a Forest Plan because there is no evidence in this record that the Forest Service adopted a technical meaning. Not

cade Mountains, which are set forth in the Forest Service’s “Environmental Assessment for the Continuation of Interim Management Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales,” appendix B, June 1995. *Lands Council*, 479 F.3d at 641 n.5. They were incorporated into the Forest Plan through Umatilla Forest Plan Amendment #11.

only are the NFMA and the Forest Plan silent on the definition of “live trees,” but neither the Forest Service nor Intervenors have cited *any* authoritative definition of the term “live trees.” The Forest Service introduced evidence of a *practice* of harvesting dying trees, but that does not establish a technical *definition* of the term “live trees.” Foresters very well may consider dying trees suitable for logging, but on this record we cannot conclude that they consider dying trees not “live.” . . . The Forest Service is free, of course, to amend the Eastside Screens to allow logging of old-growth dying trees, either by adding a definition of the term “live trees” or by changing the requirement to maintain all live trees of a certain size. Unless and until it does so, there is no basis to adopt its proposed definition.

Id. at 642-43.

Plaintiffs also argued that the EIS’ discussion of the West Tucannon and Upper Cummins Creek roadless areas was inadequate to meet the requirements of NEPA. Because of the demanding standard of review on appeal from the district court’s denial of a preliminary injunction, we affirmed: “Although Plaintiffs may ultimately succeed on the merits, we hold that the district court did not abuse its discretion in denying Plaintiffs’ motion for injunctive relief.” *Id.* at 639-40.

On remand, the district court issued an injunction prohibiting the cutting of any live tree 21” or more in diameter at breast height. The salvage logging operation authorized by the Emergency Situation Determination continued, albeit now constrained in that one respect. The Forest Service also began a new public notice and comment process aimed at supplementing the EIS with a new definition of “live trees.”

On June 11, 2007, the Forest Service released a final Supplemental Environmental Impact Statement and issued a

record of decision. The selected alternative amended the Eastside Screens' prohibition against harvesting old-growth live trees by adding a definition of "live trees." The new definition excluded dying trees, using a predictive method known as the "Scott Mortality Guidelines."

The Supplemental Environmental Impact Statement established certain desirable criteria for the best predictive model for the School Fire Salvage Recovery Project. In particular, the Forest Service sought a method that would apply to wildfires, address all of the principal commercial species of trees within the project area, be valid for the geographic area of the project, and be operationally practical to potentially evaluate hundreds of trees per acre, over thousands of acres. The Forest Service rejected a handful of other predictive models and concluded that, "[i]n the context of the School Fire Salvage Recovery Project, we believe that the Scott Guidelines are more appropriate for predicting tree mortality than any of the alternative models individually."

The Forest Service limited the scope of the amendment to the geographic area, and for the duration, of the School Fire Salvage Recovery Project. The Forest Supervisor stated in the record of decision:

My decision amends the Umatilla National Forest's Land and Resource Management Plan Eastside Screens' wildlife standard at 6d.(2)(a) to read as follows:

Maintain all remnant late and old seral and/or structural live trees [greater than or equal to] 21" dbh that currently exist within stands proposed for harvest activities. Live trees are defined as trees rated to have a high probability of surviving the effects of fire, and trees rated to have a moderate probability of survival where sampling

indicates that at least 50 percent of their basal cambium is alive. Dead trees are defined as trees rated to have a low probability of surviving the effects of fire, and trees rated to have a moderate probability of survival where sampling indicates that more than 50 percent of their basal cambium is dead. Survival probability is determined using [the Scott Mortality Guidelines].

This amendment applies to, and only for the duration of, the site-specific project called School Fire Salvage Recovery Project.

(Italicization omitted.) The Forest Supervisor further explained that the amendment was chosen because the common meaning of the term “live trees” “does not reflect Forest Service silvicultural practice and interpretation, and it deters the Forest Service from achieving the purpose and need of the School Fire Salvage Recovery Project.” The Forest Supervisor found that the site-specific amendment was not “significant” due to the limited temporal and geographic scope. Finally, the Forest Service issued a second Emergency Situation Determination. That Determination permitted logging under the amended Eastside Screens in four timber sales areas.

On September 17, 2007, the district court granted summary judgment to Defendants on all claims. Plaintiffs timely appealed, and the district court issued an injunction pending appeal. In this appeal, Plaintiffs challenge three aspects of the School Fire Salvage Recovery Project: the new definition of “live trees” in the Eastside Screens, the soil analysis in the EIS, and the discussion of roadless areas in the EIS.³

³Before the district court, Plaintiffs challenged several other aspects of the Forest Service’s actions, including whether the EIS considered a rea-

STANDARDS OF REVIEW

We review de novo the district court's grant of summary judgment. *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 888-89 (9th Cir. 2007).

Agency decisions that allegedly violate NEPA and NFMA are reviewed under the Administrative Procedure Act ("APA") and may be set aside only if they are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law. Although our review under this standard is deferential, the agency must nonetheless articulate a rational connection between the facts found and the conclusions made. Moreover, if an agency fails to consider an important aspect of a problem . . . or offers an explanation for the decision that is contrary to the evidence, its action is arbitrary and capricious.

Id. at 889 (citations, internal quotation marks, and alterations omitted).

DISCUSSION

A. *The New Definition of "Live Trees"*

Plaintiffs raise a number of challenges to the new definition of "live trees." Plaintiffs first argue that the amendment to the Eastside Screens is arbitrary and capricious because the new definition of "live trees" represents a change in policy, and the Forest Service did not provide a reasonable explanation for this change in policy. Because the result is the same either way, we assume that the definition reflects a change in policy.

sonable range of alternatives, whether the EIS correctly analyzed the economic costs and benefits of the project, whether the record of decision contained factual misrepresentations, and whether the EIS complied with the Forest Plan's snag retention requirements. Plaintiffs do not appeal the district court's rulings on those issues.

In *Morales-Izquierdo v. Gonzales*, 486 F.3d 484, 493 (9th Cir. 2007) (en banc) (as amended), we emphasized that “an ‘unexplained inconsistency is . . . a reason for holding an interpretation to be an arbitrary and capricious change [in policy].’ ” (Quoting *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005)) (alterations omitted) (emphasis by *Morales-Izquierdo*). We clarified, however, that that rule “is reserved for rare instances, such as when an agency provides no explanation at all for a change in policy, or when its explanation is so unclear or contradictory that we are left in doubt as to the reason for the change in direction.” *Id.* As we have noted, “*Chevron* itself involved a 180-degree reversal in an agency’s position that survived judicial scrutiny.” *Id.*; see also *Brand X*, 545 U.S. at 981-82 (observing the same).

[1] Here, the Forest Service explained that it was amending the Forest Plan because the plain-text definition of “live trees” “does not reflect Forest Service silvicultural practice and interpretation, [and] frustrates the ability of the Forest Service to achieve the purpose and need of the School Fire Salvage Recovery Project.” Plaintiffs disagree with that explanation on the merits, but the Forest Service clearly offered a rational explanation, and we are not “left in doubt as to the reason for the change in direction.” *Morales-Izquierdo*, 486 F.3d at 493. We therefore conclude that the Forest Service’s amendment to the Eastside Screens is not one of those “rare instances” in which the agency’s action is arbitrary and capricious for failure to provide an adequate explanation.

Our conclusion is unchanged by Plaintiffs’ affidavits from respected scientists in the field, which assert that the new definition of “live trees” is not properly supported by science. In other words, Plaintiffs dispute the “silvicultural practice and interpretation” of the Forest Service and prefer their experts’ interpretation over the Forest Service experts’ interpretation. We are unmoved. “When specialists express conflicting views, an agency must have discretion to rely on the reason-

able opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.” *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 378 (1989). We have applied that general principle in the context of a dispute concerning a Forest Plan provision: “We are in no position to resolve this dispute because we would have to decide that the views of [the plaintiffs’] experts have more merit than those of the Forest Service’s experts.” *Inland Empire Pub. Lands Council v. Schultz*, 992 F.2d 977, 981 (9th Cir. 1993) (brackets and internal quotation marks omitted); see also *Bear Lake Watch, Inc. v. Fed. Energy Reg. Comm’n*, 324 F.3d 1071, 1077 (9th Cir. 2003) (“[A]lthough a party [] ‘has demonstrated that some scientists dispute the Service’s analyses and conclusions, such a showing is not a sufficient basis for us to conclude that the Service’s action was arbitrary or capricious. If it were, agencies could only act upon achieving a degree of certainty that is ultimately illusory.’ ” (quoting *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1336 (9th Cir. 1992) (as amended))).

[2] That same principle applies to Plaintiffs’ challenge to the particular methodology chosen here: the Scott Mortality Guidelines. “We will not second-guess methodological choices made by an agency in its area of expertise.” *Inland Empire*, 992 F.2d at 981. Plaintiffs urge that this is not a typical dispute about methodology. They argue that the Forest Service is required to use a *scientific* methodology, which requires, at a minimum, peer review or publication. They next point out that the EIS itself states that “[t]he Scott Guidelines were apparently not peer-reviewed or published in a credible source.”

[3] We find no legal requirement that a methodology be “peer-reviewed or published in a credible source.” Plaintiffs cite 40 C.F.R. §§ 1500.1(b) and 1502.24, but those regulations contain no such requirements and do not even mention peer review or publication.⁴ The Forest Service has explained

⁴Section 1500.1(b) states in full:

NEPA procedures must insure that environmental information

that the Scott Mortality Guidelines are derived from field testing and practical experience. We do not find arbitrary the Forest Service's choice to rely on those verification techniques in lieu of peer review and publication when verifying the scientific basis of a relatively new methodology. *Cf. Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983) (holding that, "at the frontiers of science, . . . a reviewing court must generally be at its most deferential").

Plaintiffs next argue that the Forest Service "has manufactured a gap in the Forest Plan." Under Plaintiffs' view, the Forest Service is bound to the common meaning of the term "live trees." We disagree. The text of a *statute* binds an agency if it unambiguously expresses congressional intent. *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984). But the Forest Service's action in this case is amendment of a forest plan, not interpretation of a statutory term. Congress has expressed no view on the definition of "live trees." No statute or precedent of which we are aware suggests that a previously undefined technical term in a forest plan can never be clarified through amendment simply because the technical definition conflicts with the dictionary definition.

is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.

Section 1502.24 states in full:

Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.

Plaintiffs' final arguments concern the procedure that the Forest Service employed to amend the Forest Plan. The Forest Service did not amend the entire Eastside Screens with the new definition of "live trees." Instead, it expressly limited the amendment "to, and only for the duration of, the site-specific project called School Fire Salvage Recovery Project." Because of the limited scope of the amendment, the Forest Supervisor concluded that the amendment was not "significant."

[4] Under the relevant statute and regulation, the correct procedure depends on the scope of the amendment: "Significant" amendments require a lengthy and detailed amendment process; otherwise, a simpler notice and comment process suffices. 16 U.S.C. § 1604(f)(4); 36 C.F.R. § 219.10(f) (2000).⁵ Specifically, the statute provides that, if the Forest Service chooses to amend a forest plan, the forest plan "shall . . . be amended in any manner whatsoever after final adoption after public notice, and, if such amendment would result in a significant change in such plan, [after procedures in addition to public notice have taken place]." 16 U.S.C. § 1604(f)(4).

[5] The "regulations leave to the discretion of the Forest Service the question of whether any given amendment is significant." *Native Ecosystems Council v. Dombek*, 304 F.3d 886, 900 (9th Cir. 2002); *see also* 36 C.F.R. § 219.10(f) (2000) ("[T]he Forest Supervisor shall determine whether a proposed amendment would result in a significant change in

⁵The 2000 version of the regulations applies to the amendment in this case. The regulations governing the correct procedure for plan amendments have changed over the years. Current regulations establish a "transition period" between January 5, 2005, and January 7, 2008. 36 C.F.R. § 219.14(b). "Plan amendments initiated during the transition period may continue using the provisions of the planning regulations in effect before November 9, 2000" *Id.* § 219.14(d)(2). The Forest Service initiated the amendment to the Eastside Screens in the spring of 2007, within the transition period, and chose the option of applying the 2000 version of the regulations. No party contends that this choice was improper.

the plan.”). Here, consistent with other significance determinations and the Forest Service Handbook, the Forest Supervisor considered the four factors listed in the Forest Service Handbook: timing; location and size; goals, objectives, and outputs; and “management prescription” (defined as whether the change applies only to a specific situation or will affect future decisions as well). Forest Service Handbook 1909.12, ch. 5.31; *see also Prairie Wood Prods. v. Glickman*, 971 F. Supp. 457, 463 (D. Or. 1997) (observing that “[t]he Forest Service Handbook . . . provides guidelines for determining whether a forest plan amendment is significant” and listing the four factors); *Citizens’ Comm. to Save Our Canyons v. U.S. Forest Serv.*, 297 F.3d 1012, 1033 (10th Cir. 2002) (“Although the Forest Supervisor has wide discretion in deciding whether an amendment is significant, the [Forest Service Handbook] outlines factors the Supervisor must consider when assessing the significance of a proposed amendment, including [the four factors].”). We therefore reject Plaintiffs’ challenge to the Forest Supervisor’s conclusion that the amendment is not significant, to the extent that Plaintiffs simply disagree with the Forest Supervisor’s conclusion.

Plaintiffs also argue that the Forest Service arbitrarily enacted a *site-specific* amendment, particular to this salvage project, rather than a *general* amendment, applicable to all parts of the forest. In *Native Ecosystems*, we addressed a similar argument. The forest plan at issue in that case restricted road density to ensure sufficient elk habitat. *Native Ecosystems*, 304 F.3d at 890-91. Rather than close roads, the Forest Service passed a site-specific amendment that exempted the challenged timber sale from the road-density requirement. *Id.* at 891. The Forest Service concluded that the requirement was not necessary to ensure sufficient elk habitat and that the requirement was not reasonable as applied to the given timber sale. *Id.* at 898. Although identical site-specific amendments were planned for other timber sales in the forest, we held that the Forest Service’s decision to analyze each amendment separately was “reasonable.” *Id.* at 900.

We recognized that the Forest Service’s decision to limit the scope of an amendment to a particular site could be arbitrary. *Id.* We concluded, however, that waiver of the particular requirement, due to site-specific characteristics and based on the Forest Service’s expertise, was reasonable, even though waiver of the same requirement appeared likely in other timber sales. *Id.*

Similarly, in *Wyoming Sawmills Inc. v. United States Forest Service*, 383 F.3d 1241, 1250-51 (10th Cir. 2004), the Forest Service concluded that only 18,000 acres of land would be affected by its amendment and determined that the amendment was not “significant.” The plaintiff argued that the Forest Service’s significance determination was flawed because, in fact, the affected area was much greater. *Id.* at 1251-52. The Tenth Circuit recognized that a significance determination could be arbitrary but held that the plaintiff’s arguments on the size of the affected area failed to overcome the Forest Service’s expertise on this issue. *Id.* at 1252. Again, site-specific characteristics and Forest Service expertise were the lynchpins of the deference afforded the Forest Service’s significance determination.

[6] Here, as in *Native Ecosystems* and *Wyoming Sawmills*, the Forest Service’s decision to limit the scope of the amendment was informed by site-specific characteristics and Forest Service expertise. In particular, the Forest Service chose a definition that assesses the effects of a wildfire on the species of trees found in the affected forest. Evidence in the record suggests that the chosen definition may not be appropriate to assess trees affected by prescribed burning, flooding, disease, insect infestation, or any number of other causes of tree mortality. We therefore hold that the Forest Service “articulated a rational connection between the facts found and the choice made.” *Pac. Coast Fed’n of Fishermen’s Ass’n v. Nat’l Marine Fisheries Serv.*, 265 F.3d 1028, 1034 (9th Cir. 2001) (as amended) (internal quotation marks omitted).

B. *Soil Analysis in the EIS*

[7] Plaintiffs next challenge three aspects of the soil analysis in the EIS. Plaintiffs first contend that the Forest Service did not conduct an on-the-ground soil analysis as required by Ninth Circuit precedent.⁶ See *Lands Council v. Powell*, 395 F.3d 1019, 1034-35 (9th Cir. 2005) (as amended) (holding that the Forest Service’s reliance on a spreadsheet model for soil conditions violated NFMA because “[t]he Forest Service did not walk, much less test, the land in the activity area”); *Ecology Ctr., Inc. v. Austin*, 430 F.3d 1057, 1070-71 (9th Cir. 2005) (applying *Powell*). We are not persuaded. The EIS contains a 15-page analysis of soils, in which there are several references to field verification and observation. See, e.g., EIS at 3-8 (“It was evident during *field assessments* that some of the existing condition estimates will overstate the existing [detrimental soil conditions] in some cases.” (emphasis added)); EIS 3-9 (“Soil characteristics were *field verified* by the Forest Soil Scientist at the harvest unit scale.” (emphasis added)); EIS 3-10 (“Units for School Fire Salvage Recovery Project were assessed for the extent and degree of previously effected soil using *field observation* starting in the fall of 2005, the soil inventory (SRI) with *field verification* by the Forest Soil Scientist. . . .” (emphases added)). Those statements in the EIS, representing that field verification actually occurred, distinguish this case from *Ecology Center* and *Powell*. See *Wildwest Inst. v. Bull*, 472 F.3d 587, 591-92 (9th Cir. 2006) (distinguishing those cases on the basis of reports of field verification).

⁶This court recently granted en banc review of the continuing vitality of the on-the-ground rule cited by Plaintiffs. *Lands Council v. McNair*, 494 F.3d 771 (9th Cir. 2007), *reh’g en banc granted*, 512 F.3d 1204 (9th Cir. 2008); see also *id.*, 494 F.3d at 780-86 (M. Smith, J., specially concurring) (criticizing the rule announced in *Powell* and *Ecology Center*). Because we hold that the soil analysis in the EIS is sufficient even under the current rule, we need not defer submission until en banc resolution of *McNair*.

Plaintiffs make a number of technical arguments purporting to demonstrate that, despite the assertions contained in the EIS, the Forest Service must not have *actually* performed on-the-ground soil analysis. Their arguments constitute sophisticated speculation, but nothing in the record proves that the Forest Service did not do the on-the-ground analysis that it reported.

Plaintiffs next argue that the Forest Service improperly interpreted the term “severe burning” in a provision of the Forest Plan. The provision requires the Forest Service to “[p]lan and conduct land management activities so that reductions of soil productivity potential caused by detrimental compaction, displacement, puddling, and severe burning are minimized.” Also, the Forest Service Manual contains a relevant provision:

Leave a minimum of 80% of an activity area in an acceptable soil quality condition. Detrimental conditions, as defined below, also include landings and system roads. Detrimental soil quality conditions and the accompanying criteria for determining when and where these conditions occur include:

a. *Compaction, Displacement, Puddling, Severely Burned.*

. . . .

(4) *Detrimental Burned Soil.* Soils are considered to be detrimentally burned when the mineral soil surface has been significantly changed in color, oxidized to a reddish color, and the next one-half inch blackened from organic matter charring by heat conducted through the top layer. The detrimentally burned soil standard applies to an area greater than 100 square feet, which is at least five feet in width.

The EIS interprets those provisions to apply only to management-induced burns, not forest fires. Its soil analysis therefore did not account for the burning effects of the forest fire.

[8] Plaintiffs argue that the provisions should be read to include both artificially induced and naturally occurring effects. We are unpersuaded. Especially given the context of the provisions, aimed at “land management activities” and “activity areas,” it is plausible to read the quoted provision as limited to management-induced effects. In any event, we cannot say that the Forest Service’s interpretation is plainly erroneous or otherwise inconsistent. *See Forest Guardians v. U.S. Forest Serv.*, 329 F.3d 1089, 1097 (9th Cir. 2003) (“[J]udicial review of an agency’s interpretation of its own regulations is limited to ensuring that the agency’s interpretation is not plainly erroneous or inconsistent with the regulation.”).

Plaintiffs’ final argument is that the Forest Service impermissibly used the “long-term average annual prediction” method instead of Plaintiffs’ preferred “return period analysis for soil erosion” method. As stated above, “[w]e will not second-guess methodological choices made by an agency in its area of expertise.” *Inland Empire*, 992 F.2d at 981. In addition, Plaintiffs concede that Dr. Elliot is the premier expert in this area of soil analysis, and the record contains a declaration by Dr. Elliot that Plaintiffs’ preferred method is “seldom used” and tends to produce incorrectly high results.

[9] In summary, we affirm the district court’s holding that the EIS’s soil analysis violates neither NEPA nor NFMA.

C. Roadless Area Analysis in the EIS

Citing *Smith v. United States Forest Service*, 33 F.3d 1072 (9th Cir. 1994), and *National Audubon Society v. United States Forest Service*, 46 F.3d 1437 (9th Cir. 1993), Plaintiffs argue that the EIS violates NEPA because it does not contain

an adequate discussion of the effects of the proposed logging on the roadless character of two substantial roadless areas. West Tucannon roadless area is a bounded uninventoried roadless area that contains 4,284 acres. Upper Cummins Creek roadless area is an uninventoried roadless area that contains 966 acres but, when combined with the adjacent Willow Springs inventoried roadless area, forms a “roadless expanse” of more than 13,000 acres. *See Smith*, 33 F.3d at 1078 (referring to a contiguous area comprised of an uninventoried roadless area and an inventoried roadless area as a “roadless expanse”).

[10] In *Smith*, 33 F.3d at 1078-79, we held that there are at least two separate reasons why logging in roadless areas is environmentally significant, so that its environmental consequences must be considered. First, roadless areas have certain attributes that must be analyzed. Those attributes, such as water resources, soils, wildlife habitat, and recreation opportunities, possess independent environmental significance. Second, roadless areas are significant because of their potential for designation as wilderness areas under the Wilderness Act of 1964, 16 U.S.C. §§ 1131-1136. *Lands Council*, 479 F.3d at 640; *Smith*, 33 F.3d at 1078-79.

[11] Plaintiffs do not challenge the EIS’s discussion of the *attributes* of the roadless areas. Instead, they argue that the EIS does not comply with the requirement in *Smith* that the roadless areas be discussed in the context of their *potential for wilderness designation*. In *Smith*, we held that “the possibility of future wilderness classification triggers, at the very least, an obligation on the part of the agency to disclose the fact that development will affect a 5,000 acre roadless area.” 33 F.3d at 1078. Defendants respond that the EIS is sufficient because, unlike the roadless area at issue in *Smith*, each roadless area here is uninventoried and contains less than 5,000 acres. We hold that those characteristics do not provide a meaningful legal distinction from the roadless area in *Smith*.

[12] The Upper Cummins Creek roadless area is indistinguishable from the roadless area at issue in *Smith*. In *Smith*, we considered an uninventoried roadless area of approximately 4,000 acres that was contiguous to an inventoried roadless area of approximately 2,000 acres. 33 F.3d at 1077. Logging was scheduled to occur only in the uninventoried land, but we concluded nevertheless that the area must be analyzed as *one* combined roadless area of more than 6,000 acres. *Id.* at 1077-78 & n.3. Here, the Upper Cummins Creek roadless area contains approximately 1,000 acres of uninventoried land and is contiguous to an inventoried roadless area of approximately 12,000 acres. Following *Smith*, we consider the Upper Cummins Creek roadless area not in isolation, but in combination with the contiguous inventoried roadless area. It is undisputed that this “roadless expanse” contains more than 5,000 acres.

[13] Additionally, the Wilderness Act does not limit the potential for wilderness designation to roadless areas 5,000 acres or larger. The Act states that an area is suitable for wilderness designation if it meets several requirements, including that the area “has at least five thousand acres of land *or* is of sufficient size as to make practicable its preservation and use in an unimpaired condition.” 16 U.S.C. § 1131(c) (emphasis added). As we explained in the original appeal, “[t]he Wilderness Act does not require an absolute minimum of 5,000 acres; it also allows for designation where the area ‘is of sufficient size as to make practicable its preservation and use in an unimpaired condition.’” *Lands Council*, 479 F.3d at 640 (quoting 16 U.S.C. § 1131(c)).

[14] The roadless area in *Smith*, of course, contained more than 5,000 acres, so naturally we discussed the issues by reference to “a 5,000 acre roadless area.” But the foundation for the rule—the potential for wilderness designation under the Wilderness Act—demonstrates that the rule applies with equal force to roadless areas “of sufficient size as to make practicable its preservation and use in an unimpaired condi-

tion.” 16 U.S.C. § 1131(c). In particular, we hold that “the possibility of future wilderness classification triggers, at the very least, an obligation on the part of the agency to disclose the fact that development will affect a 5,000 acre roadless area,” *Smith*, 33 F.3d at 1078, *or* will affect an area of sufficient size as to make practicable its preservation and use in an unimpaired condition. We need not explore the smallest possible area that would be “sufficient” under the statute; we are confident on this record that the 4,284-acre West Tucannon roadless area is of sufficient size to fall within the rule.

[15] In summary, the Forest Service was required to discuss the effects of the proposed logging on the roadless character of both roadless areas. *Smith* held that the size of an uninventoried roadless area must be considered in combination with the size of any contiguous inventoried roadless area. The size of Upper Cummins Creek combined with the size of contiguous Willow Springs is more than 5,000 acres. We make clear today that the rule in *Smith* applies to roadless areas that are *either* greater than 5,000 acres *or* of a “sufficient size” within the meaning of 16 U.S.C. § 1131(c). The West Tucannon roadless area falls within the scope of that rule.

Defendants next argue that, even if the Forest Service was required to include a discussion of the roadless areas, the EIS in fact includes such a discussion. The EIS does contain a three-page analysis on “roadless character,” but the cursory nature of the discussion and legal errors in it render it insufficient to meet the requirements of NEPA.

In three separate passages, the EIS erroneously declares that 5,000 acres is an absolute minimum size criterion for potential designation as a wilderness area. *See* EIS at 3-270 (“There are no other areas within the School Fire Salvage Recovery Project area that meet or exceed the 5,000 acre size criteri[on] for roadless.”); *id.* (“There are no large blocks of land where the undeveloped character of the area meets the minimum criteri[on] of 5,000 acres or greater that might make

them potentially designated as an [inventoried roadless area] or wilderness area.”); *id.* at 3-271 (“There would be no direct, indirect, or cumulative effects to alter the undeveloped character of any land because there are no large blocks that meet the minimum criteri[on] of 5,000 acres or greater.”). The EIS erroneously adds that “[n]or are there areas of undeveloped character adjacent to an existing [inventoried roadless area] or wilderness area suitable for consideration.” *Id.*; *see also id.* at 3-270 (nearly identical statement).

Wholly apart from those errors, we conclude that the EIS’s discussion fails to meet even the bare minimum requirement discussed in *Smith* and analyzed above: “the possibility of future wilderness classification triggers, *at the very least*, an obligation on the part of the agency to disclose the fact that development will affect a 5,000 acre roadless area.” *Smith*, 33 F.3d at 1078 (emphasis added). Upper Cummins Creek, combined with the contiguous inventoried roadless area, comprises one roadless area much larger than 5,000 acres. That fact is nowhere revealed in the EIS. As in *Smith*, “nowhere has the agency disclosed that the inventoried and uninventoried lands together comprise one 5,000 acre roadless area.” *Id.* at 1079. Similarly, the West Tucannon roadless area contains nearly 5,000 acres (i.e., is “of sufficient size”) but the EIS never discloses that fact.⁷

[16] In conclusion, we reverse the district court’s holding that the EIS’s discussion of the effects of the proposed log-

⁷It is true, of course, that the EIS contains a map and other data describing where the proposed logging will occur. From that information, it is possible (as Plaintiffs have done) to piece together where logging will occur, where roadless areas are located, and where the two intersect. But such data are *always* present, as they were in *Smith*. *Smith* requires that the agency disclose that significant roadless areas will be affected and take the requisite “hard look” at the environmental consequences of that fact. The bare data that allow the public to discover that, contrary to the assertions in the EIS, significant roadless areas *will* be affected is insufficient.

ging in the roadless areas complied with the requirements of NEPA. We affirm the district court in all other respects.

AFFIRMED in part, REVERSED in part, and REMANDED. The parties shall bear their own costs on appeal.