UNITED STATES DISTRICT COURT

DISTRICT OF IDAHO

IDAHO WOOL GROWERS ASSOCIATION; AMERICAN SHEEP INDUSTRY ASSOCIATION; PUBLIC LANDS COUNCIL; WYOMING WOOL GROWERS ASSOCIATION; CARLSON COMPANY, INC.; SHIRTS BROTHERS SHEEP; and COLORADO WOOL GROWERS ASSOCIATION,

Plaintiffs,

vs.

TOM VILSACK, in his official capacity as Secretary of Agriculture; TOM TIDWELL, in his official capacity as the United States Forest Service Chief; KEITH LANNOM, in his official capacity as the Payette National Forest Forest Supervisor; and UNITED STATES FOREST SERVICE,

Defendants,

THE WILDERNESS SOCIETY; WESTERN WATERSHEDS PROJECT; and HELLS CANYON PRESERVATION COUNCIL,

Intervenors - Defendants.

Case No. 1:12 cv-469 AWT

ORDER ON CROSS-MOTIONS FOR SUMMARY JUDGMENT

Now pending before the court are the parties' cross-motions for summary judgment, which have been fully briefed and argued and, on March 17, 2014, taken under submission. For the reasons set forth below, Defendants' and Intervenors-Defendants' motions are **granted**. Plaintiffs' motion is **denied**.

I. Background

In 2003, Defendants completed a revision of the 1988 Payette National Forest Land and Resource Management Plan. FS005768 [ROD at 1]. The Intermountain Regional Forester received a number of appeals of that revision, asserting that it failed adequately to address the risk of disease transmission between bighorn sheep and domestic sheep, and thus to protect bighorn sheep populations. *Id.* The Chief of the Forest Service agreed and instructed the Regional Forester to "reanalyze the potential impacts of domestic sheep grazing on bighorn sheep viability." *Id.*

The 2010 Final Supplemental Environmental Impact Statement (FSEIS) and Record of Decision (ROD) are the product of that remand. In 2008, the Forest Service released a Draft SEIS that considered the effects on bighorn sheep viability of various wildlife management alternatives. FS017430-575. In 2010, following notice and comment, Defendants released the FSEIS and ROD. FS005762-98 (ROD); FS005028-5761 (FSEIS). Those documents formalized Defendants' decision to adopt an alternative ("Alternative 7O modified") that reduces domestic sheep grazing on the Payette National Forest (Payette) by approximately 70%. FS005781 [ROD at 14]. Defendants concluded that it is necessary to limit domestic sheep grazing to protect bighorn sheep against the risk of disease transmission from domestic sheep. FS005777-83 [ROD at 10-16].

Plaintiffs brought suit for declaratory and injunctive relief under the National Environmental Protection Act (NEPA), 42 U.S.C. §§ 4321-4370h, challenging the adequacy of the FSEIS and ROD. Plaintiffs now move for summary judgment, and Defendants and Intervenors-Defendants cross-move.

II. Legal Standard

Summary judgment is proper where there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986). The court must draw all reasonable inferences in favor of the nonmoving party. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986).

"The Administrative Procedure Act ('APA') provides authority for the court's review of decisions under NEPA . . . ." *N. Idaho Cmty. Action Network v. U.S. Dep't of Transp.*, 545 F.3d 1147, 1152 (9th Cir. 2008). "Under the APA, the district court may only set aside agency actions that are 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.'" *Id.* (quoting 5 U.S.C. § 706(2)(A)). A decision is 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. at 1152-53 (quoting *Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008) (en banc)). "When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts." *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 378 (1989). Indeed, "[a] court generally must be at its most deferential when reviewing scientific judgments and technical analyses within the agency's expertise under NEPA." *Native Ecosystems Council v. Weldon*, 697 F.3d 1043, 1051 (9th Cir. 2012) (internal quotation marks omitted).

III. Merits

NEPA is a procedural statute; "it does not dictate the substantive results of agency decision making." *Id.* Rather, "[i]ts purpose is to ensure that federal agencies take a 'hard look' at the environmental consequences of their proposed actions before deciding to proceed." *Id.* "[T]he agency must, at a minimum, support its conclusions with studies that the agency deems reliable." *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668

F.3d 1067, 1075 (9th Cir. 2011) (citing *Lands Council*, 537 F.3d at 994). "[T]he agency must 'explain the conclusions it has drawn from its chosen methodology, and the reasons it considered the underlying evidence to be reliable.'" *Id.* (quoting *Lands Council*, 537 F.3d at 994). "An agency will have acted arbitrarily and capriciously only when 'the record plainly demonstrates that [the agency] made a clear error in judgment in concluding that a project meets the requirements' of NEPA." *Weldon*, 697 F.3d at 1043 (alteration in original) (quoting *Lands Council*, 537 F.3d at 994).

Plaintiffs contend that Defendants violated NEPA in three ways: by (A) failing adequately to support their assumption that domestic sheep transmit deadly bacteria to bighorn sheep; (B) failing to take a "hard look" at potential risk factors to bighorn sheep viability other than domestic sheep grazing; and (C) using inadequate data and models. Plaintiffs also contend that Defendants (D) violated this Court's previous orders by relying on the findings and conclusions of a committee formed in violation of the Federal Advisory Committee Act (FACA).[1] The court considers each argument *seriatim*.

A. Failure to support disease transmission assumption

Plaintiffs first argue that Defendants failed adequately to support their assumption that domestic sheep transmit a deadly pathogen to bighorn sheep. Plaintiffs say that the assumption lacks adequate support for two reasons: (1) it failed to account for expert agency comments, in violation of 40 C.F.R. §§ 1500.1(b), 1502.24; and (2) it failed properly to address the relevance of unavailable or incomplete scientific information, in violation of 40 C.F.R. §§ 1502.22, 1500.2(b).

1. Failure to consider relevant expert agency comments

40 C.F.R. § 1500.1(b) provides that "expert agency comments" are one of a few factors that are "essential to implementing NEPA." 40 C.F.R. § 1500.1(b); *see also id.* §

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[1] This court previously held that the process by which Defendants established the committee violated FACA. *See Idaho Wool Growers Ass'n v. Schafer*, 637 F. Supp. 2d 868, 879-80 (D. Idaho 2009) (*Wool Growers I*).

1502.24 ("Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements."). Plaintiffs contend that Defendants violated this requirement by failing to consider input from the Agricultural Research Service (ARS), the in-house research agency of the U.S. Department of Agriculture. Plaintiffs focus on the allegedly overlooked input of two ARS scientists in particular, Drs. Knowles and Highland. Plaintiffs argue that Defendants failed to solicit input from the ARS, Knowles, or Highland; ignored a paper (the Knowles and Rink paper) casting doubt on the link between domestic sheep grazing and bighorn health issues; and ignored Knowles' criticism of a paper (the Lawrence, et al., paper) that found such a link. Defendants respond, first, that the ARS, Knowles, and Highland are not relevant "experts," because they have no expertise in "wildlife management." Second, they argue that they *did* account for opposing viewpoints, including Knowles'.

NEPA case law demands that courts give deference to agencies' reasonable selection of viewpoints among competing experts. *See Marsh*, 490 U.S. at 378; *Weldon*, 697 F.3d at 1051. The evidence demonstrating that disease transmission occurs between domestic and bighorn sheep is by no means conclusive. *See* FS005778 [ROD at 11] (acknowledging this uncertainty). But nothing in the record suggests that it was unreasonable for Defendants to have concluded that that extensive (albeit developing) body of evidence "indicate[s] that contact of wild bighorn populations with domestic sheep does pose a risk of disease transmission and die-offs in the free-ranging bighorn populations." FS005092 [FSEIS at 3-11]; *see also* FS005778 [ROD at 11] (concluding despite the "scientific uncertainty" that "the majority of literature" supports the plausibility of disease transmission). To the extent that Plaintiffs merely express an opposing position in that debate, Defendants did not act arbitrarily and capriciously by

rejecting it.[2] *See N. Idaho Cmty. Action Network*, 545 F.3d at 1152-53 (explaining that an agency decision is arbitrary and capricious only if, among other things, it "is so implausible that it could not be ascribed to a difference in view or the product of agency expertise").

Plaintiffs' better argument is that Defendants simply consulted the wrong kinds of experts, making an informed decision impossible. Indeed, Plaintiffs go so far as to argue that Defendants' "lost the . . . deference otherwise accorded [to] agencies making predictions within their special expertise" because Defendants did not have special expertise.

Defendants' initial response to Plaintiffs' argument is too facile, but their second suffices. Defendants respond initially that they did have special expertise (in fact, that Plaintiffs did not) because the relevant decision in this case is a "wildlife management decision." Defendants are correct that "wildlife management" is one component of the

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[2] The 2006 Knowles and Rink "paper" and Knowles' 2010 criticism of the Lawrence, et al., paper are not to the contrary. The 2006 paper is an apparently unpublished, five-page "outline." FS012451-55. And the extensive literature that Defendants cite largely contradicts that outline. *See infra* note 4 and accompanying text. It was not unreasonable for Defendants to have interpreted the literature differently than the outline interpreted it.

Knowles' 2010 criticism postdates the finalization of the FSEIS and ROD, so Defendants did not address it there. FS070049-50. Rather, they amply and reasonably respond to the criticism in their declarations and in letters responding to Knowles' letter. Plaintiffs are correct t that Defendants' post-hoc defense of the Lawrence paper cannot justify its use in the FSEIS and ROD. But Defendants did not need to justify use of the paper because Knowles' criticisms were not presented to the agency. *See Lands Council*, 537 F.3d at 1001 (explaining that agencies need not "affirmatively present every uncertainty" but rather "acknowledge and respond to comments by outside parties that raise significant scientific uncertainties and reasonably support that such uncertainties exist").

The important point with respect to both documents (the 2006 outline and 2010 letter) is that Defendants considered opposing viewpoints that were presented to them and reasonably rejected them. *See infra* note 4 and accompanying text; *cf. Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1087 (9th Cir. 2013) ("All that NEPA requires is that the lead agency consider these concerns [of other agencies] and explain why it finds them unpersuasive."). Defendants did not also need to *credit* Knowles' criticism to satisfy NEPA.

decision, or perhaps the broader category of decision, but there is a "disease transmission" decision subsidiary to the "wildlife management" decision (whether domestic sheep in fact transmit disease to bighorn sheep) that is Plaintiffs' focus. Thus, Plaintiffs distinguish the experts in this case with great particularity: veterinarians, infectious animal disease experts, pathologists, wildlife biologists, and wildlife ecologists. Defendants did not consult the first three types of experts, Plaintiffs argue, who are experts in *disease transmission*, so Defendants did not have relevant expertise to understand the transmission question.

Plaintiffs appear to be correct that Defendants did not retain experts with specialized expertise in disease transmission,[3] but the failure to retain such experts does not mean that Defendants lacked the relevant expertise. Essentially, Defendants relied on an extensive scientific literature to support their assumption that domestic sheep transmit a deadly pathogen to bighorn sheep. *See* FS005087-95 [FSEIS at 3-6 to 3-14] (reviewing the literature); FS005777-78 [ROD at 10-11] (citing to the "preponderance of scientific literature" in justifying the disease transmission assumption). That literature was authored in large part by veterinarians, infectious animal disease experts, and pathologists. And Defendants' experts in disease modeling, wildlife biology, wildlife ecology, and epidemiology were qualified to interpret the literature and to determine that the weight of the evidence supported the plausibility of disease transmission between domestic and bighorn sheep. *See, e.g.*, FS005095 [FSEIS at 3-14] (coming to the analytically modest conclusion that "[s]cientists from both sides of the issue recommend

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[3] Defendants' experts are for the most part disease modeling, wildlife management, biology, or bighorn sheep experts. Dr. Srikumaran, who appears to have disease transmission expertise and on whose declaration Defendants rely significantly in their briefing, does not appear to have worked on the FSEIS or ROD. Defendants say that they did not need to consult the ARS or Knowles because they contracted with the Center for Animal Disease Modeling and Surveillance (CADMS), which is a world-class expert in "quantitative disease transmission modeling." But expertise in disease modeling is not the same as expertise in disease transmission or pathology.

that the species be kept separate until the disease transmission science is better understood"). Importantly, contrary to Plaintiffs' contention, the record shows that Defendants considered opposing viewpoints: Defendants recognized uncertainty in the literature and responded to comments challenging the disease transmission link.[4] NEPA does not require that agencies retain experts in the fields of every particular science underlying a given decision. Defendants relied on experts capable of making an informed decision about the weight of the scientific literature. And, again, Plaintiffs' opposing interpretation of that literature does not render Defendants' informed decision "so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *N. Idaho Cmty. Action Network*, 545 F.3d at 1152-53. Defendants committed no "clear error in judgment," *Weldon*, 697, F.3d at 1043, by relying on the experts on which they relied, by relying on those experts to address opposing viewpoints, and by interpreting the scientific literature to support a disease transmission link.

2. Incomplete information

Plaintiffs further argue that the FSEIS and ROD failed to obtain or properly to address unavailable or incomplete information linking domestic sheep to bighorn sheep deaths in natural conditions. Plaintiffs argue, in effect, that the disease transmission science is uncertain. They contend that Defendants did not acknowledge this uncertainty, that the transmission science is "incomplete," and that no evidence shows conclusively that transmission can happen *in the wild*. While Plaintiffs are correct that the science does not definitively demonstrate that disease transmission occurs, they are again

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[4] *See, e.g.*, FS005093-95 [FSEIS at 3-12 to 3-14] (specifically addressing and rejecting "Alternative Arguments"); FS005778 [ROD at 11] ("Some scientists and others, primarily from agricultural disciplines, contend that disease transmission between bighorn sheep and domestic sheep is not a relevant factor in bighorn sheep [viability] . . . . I have taken these arguments into consideration . . . ."); FS67364-81 (Marie S. Bulgin comments criticizing disease transmission conclusions); FS65875-76 (same); FS006127 (responding to comments); FS006133-34 (same); FS006233-35 (same); FS067797-99 (same).

incorrect to say that Defendants did not acknowledge the uncertainty.[5] And they are incorrect to imply that Defendants could not act in light of that uncertainty. Contrary to Plaintiffs' contention, Defendants have not adopted "a decide first, study later approach." They have identified a *risk* to bighorn sheep viability, and they have reasonably concluded that the risk is sufficient to warrant action.[6] *See* FS005778 [ROD at 11] ("While there clearly are gaps in the knowledge base . . . , the majority of scientific literature supports the potential for disease transmission between the species, documents bighorn die-offs near domestic sheep, and supports the management option of keeping these species separate to prevent disease transmission."). Scientific *certainty*, as Defendants would say, is not "essential to a reasoned choice among alternatives." *See* 40 C.F.R. § 1502.22. The scientific literature on which Defendants relied permitted a "reasoned choice among alternatives," despite attendant uncertainties.[7]

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[5] *See, e.g.,* the sources cited, *supra*, note 4.

[6] The Lawrence study provided data reinforcing the plausibility of this risk. It did not alter Defendants' proposal; it merely made Defendants' choice of alternatives stronger. The study is not "significant" new information within the meaning of 40 C.F.R. § 1502.9(c), demanding supplementation or recirculation of the Draft SEIS. *See Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 873-75 (9th Cir. 2004).

[7] None of the specific uncertainties to which Plaintiffs cite is sufficient to render Defendants' actions arbitrary and capricious. Plaintiffs note Defendants' admission that "limited knowledge of transmission dynamics exists," and Plaintiffs assert that some evidence contradicts the disease transmission assumption. But Defendants concluded that the literature still pointed to the conclusion that disease transmission occurs, despite the uncertainty that Defendants acknowledged. *See supra* note 4 and accompanying text. And the contrary evidence to which Plaintiffs cite is limited. In any case, that contrary evidence is insufficient to render Defendants' interpretation of the scientific literature arbitrary and capricious. *See supra* note 2. Plaintiffs also contend that the Lawrence study cannot be extrapolated from the lab to natural conditions. But Defendants' defense of the extrapolation is reasonable. *See also id.* Defendants' defenses are not impermissible post-hoc rationalizations. Again, Defendants did not need to respond to every uncertainty, but rather significant uncertainties presented to the agency. *See Lands Council*, 537 F.3d at 1001. Where parties raised such uncertainties to the agency, Defendants responded reasonably. *See*

B. Failure to take a "hard look" at other risk factors

Plaintiffs next argue that Defendants failed to take a "hard look" at "the multitude of other risk factors" that contribute to bighorn sheep health, including that: (1) disease transmission is endemic to bighorn sheep populations; (2) wolves transmit disease to bighorn sheep; and (3) bighorn sheep contract disease by grazing on lands off of the Payette.

1. Disease transmission from other bighorn sheep

Some data to which Plaintiffs point show that "once [a particular pathogen] [has] been introduced to bighorn sheep populations, [it] may become endemic and continue cycling for decades." FS005088 [FSEIS at 3-7]; *see also* FS018503 (raising this point in a 2007 meeting). Contrary to Plaintiffs' suggestion, Defendants considered and addressed this possibility. They responded, in effect, that one risk (endemic disease cycling) does not take away from other risks (transmission from domestic sheep). FS006134. So "[e]ven though other events may lead to die-offs of bighorn sheep, the Forest Service still ha[d] a responsibility to address the risk of disease posed by its management decisions relating to domestic sheep grazing." *Id.*; *see also* FS006137 (noting the need to manage the risk of disease from domestic sheep even if some bighorn populations carry disease endemically); FS006225 (same); FS006234 (same). Defendants further concluded that there was insufficient information on endemic disease transmission to model the possibility accurately. FS005447. And they cited research showing that "pathogens evolve as they move within and between species" and that certain domestic sheep carry pathogens that are lethal to bighorn sheep but not domestic sheep – suggesting that there are still pathogen strains capable of transfer, even if domestic sheep have already transferred one lethal strain. FS005095 [FSEIS at 3-14].

Defendants' response is reasoned and reasonable. NEPA does not require that

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supra note 4.

agencies eliminate all risks contributing to a problem before they can address one of those risks. *Cf. Lands Council*, 537 F.3d at 1001 (explaining that agencies need not even "*present* every uncertainty in its EIS" because "such a requirement might inadvertently prevent [agencies] from acting due to the burden it would impose" (emphasis added)). Whatever the risks from endemic disease transmission, there is still a risk from domestic sheep that is within Defendants' control, even if domestic sheep have already transmitted one lethal pathogen strain. Plaintiffs' studies also show the *possibility* of endemic disease transmission, but they do not show the *fact* of it or the irrelevance of taking any other protective action. *Cf. id.* ("[T]he Forest Service must acknowledge and respond to comments by outside parties that raise significant scientific uncertainties and reasonably support that such uncertainties exist."). Most importantly, NEPA does not dictate substantive results. Defendants responded to the uncertainty of endemic disease transmission, and it is not this Court's place to pass on the wisdom of that judgment, only that it was reasonable and informed.

2. Effect of wolves

Plaintiffs next argue that Defendants failed to address "how the reintroduction of wolves has affected bighorn sheep movements." *See* FS006150 (summarizing this concern); FS061817 (raising the issue). The record, however, demonstrates in at least two ways that Defendants adequately considered the effect of wolves.

First, the record shows that Defendants directly addressed the effect of wolves. FS006150 (responding to the concern); FS067823-24 (same). Defendants concluded that wolves did not significantly affect the risk of disease transmission to bighorn sheep based on the facts that: (1) bighorn sheep and wolves had cohabited the Payette for many years and that bighorn sheep had "survived in large quantities"; (2) bighorn sheep are generally located in "terrain too severe for wolves"; and (3) no research has shown that wolves

affect bighorn susceptibility to disease.[8] FS067823-24.

Second, the telemetry data used in Defendants' Risk of Contact Model was collected from beginning two years after the reintroduction of wolves on the Payette. FS005108**.** Thus, the outcome of that contact analysis accounted for the presence of wolves, FS006150, and found a continued risk of contact between bighorn and domestic sheep, FS005169 [FSEIS at 3-88]. Defendants thus addressed Plaintiffs' concern, and their response is reasonable.

3. Effect of grazing on lands off of the Payette

Plaintiffs lastly argue that Defendants did not adequately consider that bighorn sheep will continue to graze off of the Payette and to contact domestic sheep there. Plaintiffs point out that Defendants' own analysis suggested that off-Payette grazing would result in "substantial" contact and threaten bighorn sheep viability. But Defendants did not account for off-Payette grazing in their Disease Model. *See* FS005075 [FSEIS 2-18].

The court rejects Plaintiffs' arguments for the same reasons as above. Defendants recognized the increased risk of contact from off-Payette grazing but they cannot control that risk factor. FS005782 [ROD at 15]. Rather, they can control grazing only on the Payette, ***id.***, and their chosen alternative will reduce the risk of disease transmission, even if it does not eliminate the risk entirely. *Id.*; *see also* FS005095 [FSEIS at 3-14]. Although Defendants did not "run" the disease model to include the effects of off-Payette grazing, FS005782 [ROD at 15]; FS005075 [FSEIS 2-18]; FS005169 [FSEIS at 3-88], Defendants reasonably concluded that including off-Payette grazing in the model would be irrelevant: Defendants used the Disease Model "as a means of comparing the relative impacts of alternatives," FS005137 [FSEIS at 3-56], and the risk of contact from off-

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[8] Indeed, studies cited in the FSEIS show that bighorn sheep populations in Yellowstone National Park increased after the reintroduction of wolves. FS005453-54; FS005595; FS013661.

Payette grazing affects all of the alternatives equally negatively. Again, NEPA does not dictate substantive results, Defendants addressed the risk of off-Payette grazing, and they responded reasonably.

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In sum, contrary to Plaintiffs' contentions, the three additional risk factors do not "upset [Defendants'] assumption that domestic sheep on the Payette transmit bacteria to wildlife bighorns which then kills them." The factors merely add risk to bighorn sheep viability without "upset[ting] [Defendants'] assumption" about the risk that continues to exist from domestic sheep. Defendants addressed the challenges and responded reasonably in rejecting them. The court therefore rejects Plaintiffs' three "hard look" challenges.

C. Inadequacy of Models

NEPA requires that agencies "insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." 40 C.F.R. § 1502.24; *see also Lands Council*, 537 F.3d at 994 (stating the agency must "support its conclusions . . . with studies that the agency, in its expertise, deems reliable"). Agencies must also give "up-front disclosures of relevant shortcomings in [their] data or models." *Lands Council v. Powell*, 395 F.3d 1019, 1032 (9th Cir. 2004).

Plaintiffs argue that Defendants' "Source Habitat," "Risk of Contact," and "Disease" models failed to satisfy NEPA's standard of professional and scientific integrity and that Defendants failed to disclose the models' shortcomings.[9] The court considers Plaintiffs' claims as to each model.

1. Source Habitat Model

[9] Plaintiffs also passingly imply that the models must be peer reviewed. NEPA imposes no such requirement. Whether a model is peer reviewed is relevant only insofar as it informs the broader "scientific integrity" question and supports the agency's determination, "in its expertise," that the model is "reliable."

Plaintiffs contend that Defendants' Source Habitat Model – used to identify habitat suitability and where bighorn sheep are likely to spend time – assumed that bighorn sheep were "more likely [to] foray into habitat containing available forage (considered 'suitable habitat')."[10] Plaintiffs argue that Defendants did not support this assumption and that they failed to consider other factors (like breeding, natural barriers, and predators) that influence bighorn sheep forays.

This argument is based on a mischaracterization of Defendants' model. Defendants first classified habitats – as either "source habitat," "connectivity area," or "non-habitat" – along a number of metrics, including the type of terrain and horizontal visibility. FS005103-04 [FSEIS at 3-22 to 3-24]; FS005677-78. None of the metrics appears to be defined by available forage. Next, Defendants modeled bighorn sheep preferences for the habitats. FS005119-20 [FSEIS at 3-38 to 3-39]. The record does not indicate that Defendants merely equated bighorn sheep preferences with suitable habitat (defined by "available forage" or otherwise). Rather, Defendants used telemetry data from actual bighorn sheep movements gathered over twelve years. FS005108 [FSEIS at 3-27]; FS005421. That data – described both in the FSEIS, FS005108-21 [FSEIS at 3-27 to 3-40], and in the Modeling and Analysis Technical Report, FS005672-726 – reflect actual bighorn sheep behavior, including their behavior in relation to forage, breeding, barriers, predators, and any number of other factors. The data validated Defendants modeling, revealing that bighorn sheep were 34 times more likely to be found in "source habitat" than in "non-habitat" and six times more likely to be found in "source habitat" than in "connectivity area." FS005420; FS005679.

This modeling did not equate suitable habitat with occupied habitat. Indeed, Defendants consistently acknowledged that "availability of suitable habitat does not infer

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[10] A "foray" is a "long-distance movement[]" beyond a bighorn sheep's "core herd home range." FS005116 [FSEIS at 3-35].

occupied habitat" and thus that "the inference that suitable habitat is an accurate proxy for occupied habitat is not useful in assessing the persistence of bighorn sheep populations." FS005080-81 [FSEIS at 2-23 to 2-24]; *see also* FS005733. Although Plaintiffs impute this assumption to Defendants, Defendants' models appear considerably more complex.

Second, where Plaintiffs' criticisms were presented to the agency, the agency responded reasonably, stating that the model incorporated topographic and landscape factors, FS005420 (responding to comment); *see also* FS005677 (describing the model as incorporating such factors), and that the model was adjusted to account for the fact that bighorn sheep had "higher 'preference' for non-habitat and connectivity areas" when on forays than when in their core herd home range, FS005422 (responding to comment).

Third, the model's reliability and integrity is corroborated by the process by which it was developed. The model was initially designed over a decade ago by the Hells Canyon Initiative, FS005677-78, which used the model "to identify promising areas for reintroducing bighorn sheep in and around the canyon." Defendants' experts updated the model to include more accurate data and conditions, and they tested the model with actual telemetry data. FS005678-79. Finally, the model was presented on numerous occasions to Defendants' broader team of experts, including the experts at the CADMS, for review and comment. *See, e.g.*, FS060242-23; FS060262-78; FS064542-43. This process suggests that Defendants conscientiously, "in [their] expertise, deem[ed] [the model] reliable." *Lands Council*, 537 F.3d at 994. In light of all of the foregoing factors, the court cannot say that Defendants "made a clear error in judgment" in determining that the Source Habitat Model "meets the requirements of [NEPA]." *Id.*

2. Risk of Contact Model

The Risk of Contact Model identifies the probability that a bighorn sheep will enter into an area where domestic sheep graze (defined as an "allotment"). FS005684. The model has two broad components: one that addresses where bighorn sheep are likely to spend most of their time (the "core herd home range" analysis) and another that

addresses when, how frequently, and how far bighorn sheep are likely to foray (the "foray" analysis). *Id.*; see also FS005108 [FSEIS at 3-27]. Plaintiffs contend that the model is "crippled by shortcomings in the telemetry data used for the model"; in particular, that no data show that "any of the bighorn sheep studied in the 12-year period had actually ever made contact with a domestic sheep on the Payette."

The court again rejects Plaintiffs' challenge for essentially the same three reasons as discussed above. First, Defendants relied on twelve years of telemetry data in the Risk of Contact Model. FS005684; FS005108-13 [FSEIS at 3-27 to 3-32]. That data accounted for actual bighorn sheep behavior, including in relation to barriers and predators. Plaintiffs' criticisms otherwise amount to methodological disagreements. None indicates that Defendants' decision to use the model was uninformed or unreasonable.[11]

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[11] For example, Plaintiffs criticize the representativeness of the telemetry data, but Defendants show that this concern was not lost on them and that they "took pains" to ensure representativeness. Plaintiffs also point out that the data do not show any actual contact between domestic and bighorn sheep on the Payette. But Defendants did not use the data "to directly estimate contact rates" but rather "to characterize the foray behavior (including frequency, distance, and habitat affinities) of bighorn sheep." That is, the data were used primarily to estimate where bighorn sheep spend time. FS005116 [FSEIS at 3-35]. Plaintiffs then change their tune and argue that actual contact data would be useful for validating the accuracy of the model. But Defendants respond that their data were extensive and the best available. They further contend that Plaintiffs' argument amounts to a plea for ever more "complex and unwieldy model[s] with a great many parameters" and "datasets that [are] either impossibly overbroad or otherwise impractical."

This debate simply underscores the extent to which Plaintiffs' criticisms of Defendants' models are technical, methodological disagreements. It is clear from the record that Defendants developed their methodology reasonably and with care. Plaintiffs' disagreements do not render Defendants' reasoned decisions arbitrary and capricious, given Defendants' extensive review of the models, their responses to criticism, and the other indicia of reliability detailed *supra*. *See Weldon*, 697 F.3d at 1053 ("The mere fact that [a plaintiff] disagrees with [a defendant's] methodology does not constitute a NEPA violation. . . . [W]e may not insert our opinions in the place of those of [experts]. Rather, we are required to apply the highest level of deference in our review of the Forest Service's scientific judgments in selecting [a given] methodology." (citation omitted)).

Second, and more importantly, where Plaintiffs' criticisms were addressed to the agency, the agency responded reasonably. Contrary to Plaintiffs' contention, Defendants discussed their model methodology in depth. FS005103-31; FS005672-721. *See Citizens to Pres. Overton Park v. Volpe*, 401 U.S. 402, 420 (1971) (stating that a court's "review is to be based on the full administrative record that was before the Secretary at the time he made his decision"). Further, Defendants reasonably addressed criticisms of the Risk of Contact Model that were addressed to the agency. *See, e.g.*, FS006203-07 (addressing bandwidth criticism of foray analysis); FS006108-09 (discussing risk of contact from straying domestic sheep). Again, Defendants need not affirmatively address every uncertainty but rather "acknowledge and respond to" relevant comments. *See Lands Council*, 537 F.3d at 1001. Plaintiffs point to no relevant comments that were addressed to the agency to which it did not respond.

Third, the reliability of the Risk of Contact Model is corroborated by the process by which Defendants designed it.[12] The model was a built on a published, peer-reviewed model, FS005081 [FSEIS at 2-24], and Defendants appear to have accounted for relevant modeling literature in designing it. *See* FS009537-798; FS038240-41; FS060246-47. Finally, Defendants consulted extensively with their own experts, including CADMS, for review and comment. *See, e.g.*, FS060246-48; FS060262-78; FS060373-78**.** This process again indicates that Defendants reasonably deemed the Risk of Contact Model reliable.

3. Disease Model

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[12] The court notes that both the Risk of Contact and Disease models have been accepted for publication in peer-reviewed journals. Plaintiffs are correct to say that the models' post-FSEIS publication would not insulate the FSEIS and ROD from a failure to address criticism that Defendants should have addressed. But nothing indicates that Defendants should have addressed criticism of the models any more than they did. *See supra*. The models' publication merely adds further support to Defendants' contention that they are reliabale.

Plaintiffs lastly assail the Disease Model. That model estimates the likelihood that a bighorn sheep will come into contact with a domestic sheep when the bighorn sheep intersects the domestic sheep allotment, that the bighorn sheep will contract disease from the domestic sheep, and that the bighorn sheep will return to its herd and transmit the disease. FS005107 [FSEIS at 3-26]. Plaintiffs argue that the model is "drastically oversimplified" because it inflates the probability that bighorn sheep in a domestic sheep allotment will make "effective contact" with a domestic sheep (contact that transmits disease) and transmit disease back to its herd. Specifically, Plaintiffs contend that Defendants should have considered the probability of physical contact between bighorn and domestic sheep (not only that bighorn sheep will be present in a domestic sheep allotment) and the probability that disease will be transferred, including consideration of "susceptibility, infectious dose being shed, duration of shedding, and degree and duration of physical contact."

The court rejects Plaintiffs' challenge to the Disease Model. Plaintiffs volunteer more variables that they scontend Defendants should have included in the model to improve its accuracy. Defendants respond that inclusion of the additional variables would make the model too "complex and unwieldy," and "would have required the Agency to attempt to make more use of the available data than would have been scientifically defensible." Instead, Defendants opted for a simpler model that effectively accounted for Plaintiffs' additional variables by positing a range of probabilities of disease outbreak.[13] Most importantly, Defendants specifically addressed and defended

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[13] Plaintiffs' expert, Dr. Thurmond, argues that Defendants' probabilities are too high, and that Defendants assumed a 100% probability of "*cohabitation*" (*i.e.*, that a domestic sheep will be physically present in an allotment with which a bighorn sheep intersects) while assigning probabilities to only the risk of disease *outbreak*. Although Thurmond inaccurately states Defendants' lowest probability of outbreak (as 25% when Defendants actually considered a 5% probability of outbreak), Thurmond estimates a probability of outbreak of 1.28% – in other words, lower than Defendants'.

Defendants respond in two relevant ways. First, they contend that their range of

their decision to use a simpler model in appendices to the FSEIS. FS005711 (explaining the advantages of a simpler model, including clarity, transparency, accessibility, and that "population-level impacts of respiratory disease outbreaks are better understood than the details of bacterial shedding, within-herd effective contact rates, and individual variation in disease susceptibility"); FS005713 ("Because so much uncertainty surrounding this parameter [the probability of an outbreak] exists, and essentially no research exists that would allow its estimation, the disease model was run with a range of probabilities of effective contact . . . and a subsequent herd-level outbreak, given cohabitation . . . ."). And they responded to criticisms of the Disease Model, including some positing additional factors to include in the model. FS006223-43.

This is not a case in which an agency "entirely failed to consider an important aspect of the problem," *N. Idaho Cmty. Action Network*, 545 F.3d at 1152, *i.e.*, the existence of variables that affect the likelihood of a disease outbreak.[14] Rather, Defendants decided to account for those variables by other means (a probability index),

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probabilities also accounts for the probability of cohabitation. In other words, the cohabitation question is not antecedent to the probability index; it is included within the range. Also, Defendants contend that no data exist to estimate the probability of actual physical contact (as opposed to general intersection with an allotment). Second, Defendants contend that Thurmond's calculation relies on bad math and scant (if any) data. In any case, Defendants note that 5% is not even one order of magnitude greater than 1.28%.

This exchange again illustrates the extent to which Plaintiffs' challenges amount to methodological disagreements. And Defendants' response is reasonable: the probability index could be said to include the cohabitation variable, data on cohabitation is lacking, and Defendants' low probability (5%) is not far removed from Thurmond's proposed figure (1.28%).

[14] Nor did Defendants selectively omit unfavorable variables. Defendants did not consider the possibility of stray domestic sheep contacting bighorn sheep and the attraction between bighorn sheep and domestic sheep. Those variables would increase the likelihood of contact and transmission, but Defendants did not consider them because Defendants "had no quantitative basis for estimating" their likelihood. *See* FS005318 (recognizing the possibility of "straying domestic sheep").

which appears reasonable and informed. Whether or not the court agrees with Defendants' decision to use a simpler model and to control for variability by a probability index is besides the point. Defendants articulated their method, and nothing suggests that that methodological decision resulted from a "clear error in judgment." *Weldon*, 697 F.3d at 1052.

Finally, the process by which Defendants developed the model again corroborates its reliability. Defendants built the model on published, peer-reviewed models. FS005081 [FSEIS at 2-24]; FS005713. And Defendants consulted widely with their own experts, including CADMS, for review and comment.[15] *See, e.g.*, FS060246-48; FS060262-78; FS060373-78.

* * *

The court therefore rejects Plaintiffs' challenges to Defendants' models. Plaintiffs cite *Lands Council v. Powell* to support their claim that Defendants erred by not more thoroughly discussing the shortcomings of their models. *Lands Council*, 395 F.3d at 1032 ("Although there are some disclosures of the model's shortcomings . . . , nowhere do the disclosures cover the limitations of [the model] shown by the Lands Council and now conceded by the Forest Service."). But Defendants here do not concede any undisclosed limitations, and the record reveals none. Plaintiffs' criticisms are not shortcomings but methodological disagreements with Defendants' reasoned choices. Or relevant shortcomings were disclosed. *See, e.g.*, FS005778 [ROD at 11] (acknowledging uncertainty in the models). Defendants did not have "to affirmatively present every uncertainty." *Lands Council*, 537 F.3d at 1001. Defendants needed only respond to "significant" and "reasonably support[ed]" uncertainties. *Id.* Defendants did so, and their choices do not appear arbitrary and capricious.

D. Reliance on RADT committee findings

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[15] Again, as further confirmation of the model's reliability, it has been accepted for publication in a peer-reviewed journal. *See supra* note 12.

Lastly, Plaintiffs argue that Defendants improperly relied on the findings and conclusions of the RADT committee, on which this court previously disallowed Defendants from relying. *See Wool Growers I*, 637 F. Supp. 2d at 879-80 (holding that the formation of the committee violated the Federal Advisory Committee Act). Specifically, Plaintiffs contend (citing FS005100 [FSEIS at 3-19]) that Defendants relied on the RADT committee for their "principal assumption . . . that direct contact between domestic sheep and bighorn sheep results in a high likelihood of disease transmission to bighorn sheep and disease outbreaks in local bighorn sheep herds."

This "principal assumption" is the same assumption that Plaintiffs earlier attack as uninformed and unsupported by expert comments and complete information. *See supra* Part III.A. As discussed *supra*, Defendants relied primarily on their extensive review of disease transmission research and literature to substantiate the link. *See* FS005087-95 [FSEIS at 3-6 to 3-14]. This court's previous orders permit "the Forest Service's use of the underlying science that may exist to support the Committees' recommendations." *Idaho Wool Growers Ass'n v. Schafer*, No. CV 08-394 S BLW, 2009 WL 3806371, at *3 (D. Idaho Nov. 9, 2009); *see also Wool Growers I*, 637 F. Supp. 2d at 880 ("If, indeed, the Committees represented only a mechanism to collect and summarize all available data relevant to the issue at hand, that same, underlying information would exist to support future agency decisions as well."). Defendants' "principal assumption" satisfies that "underlying science" criterion.

Plaintiffs rightly note that the document cited in the FSEIS as support for the "principal assumption" provides little support. FS005100 [FSEIS at 3-19] (citing the 2003 FEIS). Indeed, the Chief of the Forest Service remanded the 2003 FEIS for the very reason that it failed adequately to address "viability or the potential for disease transmission." FS005768 [ROD at 1]. But the citation appears, at most, misplaced. The citation does not suggest that Defendants were relying on the RADT committee findings (indeed the 2003 FEIS predates the RADT committee), especially when Defendants

defend the assumption extensively in the literature review section of the FSEIS. Because Defendants' "principal assumption" relied on "underlying science," not the RADT committee report, it did not violate this court's previous orders.

IV. Conclusion and Order

For the reasons set forth above,

IT IS ORDERED:

1. Defendants' and Intervenors-Defendants' Motions for Summary Judgment (Docs. 44, 51) are **GRANTED.**

2. Plaintiffs' Motion for Summary Judgment (Doc. 37) is **DENIED.**

3. Judgment shall be entered consistent herewith.

Dated this 25th day of March, 2014.

/s/ *A. Wallace Tashima*
A. WALLACE TASHIMA
United States Circuit Judge
Sitting by Designation