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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
MISSOULA DIVISION

DEFENDERS OF WILDLIFE, et al.,	)	
	)	
Plaintiffs,	)	Case No. 9:14-cv-246-DLC
	)	
v.	)	(Consolidated with Case Nos.
	)	9:14-cv-247-DLC and

SALLY JEWELL, in her official capacity as Secretary of the Interior, et al.,	)	9:14-cv-250-DLC)
Defendants,	)	**PLAINTIFFS' RESPONSE TO FEDERAL DEFENDANTS' MOTION FOR SUMMARY JUDGMENT [Dkt.#72] AND REPLY IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT [Dkt.#62]**
and	)	
IDAHO FARM BUREAU FEDERATION, et al.,	)	
Defendant-Intervenors.	)	

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GLOSSARY OF ABBREVIATIONS

AR	Administrative Record; Plaintiffs cite the record by document category and page number
DPS	distinct population segment
ESA	Endangered Species Act
Fed. Mem.	Brief in Support of Federal Defendants' Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment [Dkt.#73]
FWS	U.S. Fish and Wildlife Service
Plaintiffs' Mem.	Plaintiffs' Memorandum of Points and Authorities in Support of Motion for Summary Judgment [Dkt.#63]

The Federal Defendants' summary-judgment brief fails to justify the U.S. Fish and Wildlife Service's unlawful withdrawal of a proposal to list the lower-48 distinct population segment of the wolverine as an endangered or threatened species under the Endangered Species Act, 16 U.S.C. § 1533.

I. FWS RECEIVES NO DEFERENCE FOR IRRATIONAL SCIENTIFIC DETERMINATIONS

FWS repeatedly argues that its scientific judgments warrant deference from this Court. Fed. Mem. at 3, 9-10, 11, 12-14. However, FWS "cannot rely on reminders that its scientific determinations are entitled to deference in the absence of reasoned analysis to cogently explain" its decisions. Nat. Res. Def. Council v. Daley, 209 F.3d 747, 755 (D.C. Cir. 2000) (quotations and citation omitted). Even when "an agency is operating in a field of its expertise," courts must disapprove agency decisions if "the agency's reasoning is irrational, unclear, or not supported by the data it purports to interpret." Nw. Coal. for Alternatives to Pesticides v. EPA, 544 F.3d 1043, 1052 n.7 (9th Cir. 2008) (quotations and citation omitted); accord Brower v. Evans, 257 F.3d 1058, 1067 (9th Cir. 2001). Under this standard, FWS's withdrawal decision warrants no deference.

II. FWS FAILS TO JUSTIFY DISMISSING THE THREAT OF GENETIC IMPOVERISHMENT

FWS offers no legitimate justification for its dismissal of the ongoing threat to the genetic viability of the lower-48 wolverine DPS arising from its extremely

small and fragmented population. The DPS suffers from a "very low" effective population[1] of 35 that FWS admits is "below what is thought necessary for short-term maintenance of genetic diversity," AR:FR-22, and there is no prospect that it can attain the 400 breeding pairs that peer-reviewed science, relied on by FWS, indicates is necessary for long-term genetic health, id. (citing Cegelski, et al. (2006), AR:LIT-662). Accordingly, this threat alone warrants listing regardless of climate change or other factors. See Plaintiffs' Mem. at 7-15.[2]

In arguing to the contrary, FWS acknowledges that it dismissed this threat upon determining that an "increased population … will alleviate the risk of low genetic diversity." Fed. Mem. at 44; accord AR:FR-8 ("[G]enetic factors are not a threat to the DPS due to increasing populations."). Yet FWS's withdrawal decision itself stated that the evidence cited to support this population-increase theory—i.e., recent lone-male wolverine dispersal to Colorado, California, and Utah—"could just as easily" reflect population expansion or a response to "habitat loss in the northern part of the DPS" due to climate change. AR:FR-16. FWS's equivocation was well founded: The best available science concluded that "our

[1] "Effective population" means the portion of the total population that breeds and contributes genetic material to sustaining the species. See AR:FR-21.

[2] FWS claims it "did not 'admit'" that 400 breeding pairs are needed for long-term genetic viability, Fed. Mem. at 44, but FWS extensively relied on this conclusion of Cegelski, et al. (2006)—particularly to determine that presently non-existent "population connectivity exchange with the larger Canadian/Alaskan population would likely be required for long-term genetic health of the DPS," AR:FR-22.

knowledge of fundamental population characteristics such as … population trajectory is lacking or based on sparse data." AR:LIT-1661 (Inman, et al. (2013)) (cited by FWS as "the best available information" on "population growth and expansion" at AR:FR-15). FWS's April 2014 science panel observed that "no evidence shows currently increasing expansion of pop[ulation] in lower 48." AR:FR-14523 (emphasis added). FWS conceded in the withdrawal decision that "[v]ery little is known" about wolverine population "trends." AR:FR-4. Because it is based on guesswork, FWS's dismissal of the genetic threat to the DPS should be invalidated. See Tucson Herpetological Soc'y v. Salazar, 566 F.3d 870, 878-80 (9th Cir. 2009) (invalidating ESA listing withdrawal decision that similarly relied on "inconclusive" and "sparse data" for key species population-status determination) (quotations and citations omitted).

Agency counsel's assertion that recent wolverine dispersal "does indeed indicate an increase in the population," Fed. Mem. at 44, does not alter this conclusion. FWS' finding may be upheld only "on the same basis articulated in the order by the agency itself," not on "post hoc rationalizations" developed by agency counsel. Burlington Truck Lines v. United States, 371 U.S. 156, 168, 169 (1962). Accordingly, FWS's counsel cannot salvage FWS's decision by claiming a certainty about the pivotal population-growth rationale that the withdrawal decision itself lacked.

FWS's reference to population-growth potential "'in the North Cascades and Northern Rocky Mountains,'" Fed. Mem. at 43 (quoting AR:FR-5358), also does not salvage the agency decision. Even if population growth were to occur, the best available science indicates that unoccupied habitat in these regions could accommodate, at most, 99 wolverines. AR:LIT-1659 (Inman, et al. (2013)). FWS failed to demonstrate that adding 99 wolverines to the total population could yield any single subpopulation achieving the minimum effective population of 50 needed for even short-term genetic integrity, much less the 400 breeding pairs needed for long-term genetic viability. See AR:FR-8, 16, 21-23. Indeed, although FWS contends that "Plaintiffs present no evidence that was not fully considered in the Withdrawal," Fed. Mem. at 41, FWS failed to address Inman's estimated habitat capacity limits in assessing whether population expansion could alleviate genetic threats to the DPS, see AR:FR-21-23; AR:FR-5358-59.[3]

FWS's treatment of the wolverine DPS's current genetic status is equally flawed. FWS reiterates that no "adverse effects from lower genetic diversity" have yet been documented in the rare and hard-to-study wolverine, Fed. Mem. at 39, but the best available science shows that: (1) the wolverine DPS consists of "a

[3] For instance, Inman estimated that the north Cascades offer unoccupied habitat for 11 additional wolverines. AR:LIT-1659. However, the total north Cascades population would still top out at 48 wolverines, see id., which logically cannot yield an effective population of 50.

network of small subpopulations on mountain tops, some consisting of less than ten individuals" and some of which are "essentially family groups," AR:PR-763, 772; (2) "[i]nbreeding and consequent loss of genetic diversity have occurred" in smaller subpopulations, id. 772; (3) the maximum effective population size in any DPS subpopulation is 35—"below what is thought necessary for short-term maintenance of genetic diversity," AR:FR-22; and (4), as a general rule, when effective population drops below 50 and "genetic diversity is low enough to lead to inbreeding depression," affected populations "show reductions in population growth rates and increases in extinction probabilities," id.; AR:LIT-388 (Allendorf & Luikart (2007)). It is impermissible "speculation and surmise," Fed. Mem. at 40, for FWS to assert without evidentiary support that wolverines fall outside this general rule and genetic impoverishment is not threatening the DPS. See Bennett v. Spear, 520 U.S. 154, 176 (1997) (best available science requirement ensures that ESA will "not be implemented haphazardly, on the basis of speculation or surmise").[4]

[4] FWS downplays the threat posed by effective populations less than 50, citing Allendorf & Luikart (2007) to argue that "'[t]here are no real thresholds.'" Fed. Mem. at 42 (quoting AR:LIT-388). But Allendorf & Luikart endorsed the minimum effective population of 50 as a "useful guideline" for identifying concern about "increased probability of extinction" and noted that it was, if anything, too low. AR:LIT-388-89.

III. FWS'S CLIMATE-CHANGE ARGUMENTS ARE ERRONEOUS

FWS offers no legitimate justification for its 11th-hour reversal on the threat that climate change poses to the snow-dependent wolverine, which was "irrational, unclear, [and] not supported by the data it purports to interpret." Nw. Coal. for Alternatives to Pesticides, 544 F.3d at 1052 n.7.

A. Wolverine Denning Habitat

First, FWS offers a superficial defense of the withdrawal decision's irrational interpretation of Copeland, et al. (2010), AR:LIT-981. FWS contends that its questioning whether "snow persisting until May 15 is a necessary condition for wolverine reproduction" is "not in conflict with Copeland" because Copeland did not assert that denning wolverines always require snow until May 15. AR:FR-14; Fed. Mem. at 21-22. FWS again misses the point: Although May 15 does represent "the approximate end of [wolverine] denning," AR:LIT-992; accord AR:LIT-1646 (Inman, et al. (2012)), Copeland's innovation was to delineate the wolverine's "bioclimatic envelope," the landscape corresponding to climatic conditions that are critical to wolverine survival and reproduction, AR:LIT-982. In so doing, Copeland did not assert that denning wolverines always require snow until May 15 but instead identified the landscape consistently defined by spring snow coverage until at least May 15 as a proxy "for cold snowy areas that would not melt out prematurely"—areas for which wolverines are physically adapted and

that they depend upon for reproductive denning, predator avoidance and, potentially, caching of food. AR:PI-1258, 1264 (citing studies); accord AR:LIT-992. As McKelvey, et al. (2011) demonstrated, climate change threatens to diminish that landscape by 31 percent in 2045 and by 63 percent in 2085 in the lower-48 states. See AR:PR-772. Rather than assessing the impact of that loss, FWS dismissed it on the facile basis that snow persisting until May 15 may not always be required for wolverine denning, AR:FR-14, thereby sidestepping the import of the Copeland data.

Second, FWS seeks to justify its determination that wolverine den sites are not "currently scarce or lacking," id., but offers no response to Plaintiffs' citation of the Landa, et al. (1998) Scandinavian study finding "relatively few suitable denning areas" or the Inman, et al. (2013) study determining that wolverines den in only "higher quality habitat" that is absent from entire mountain ranges in the western United States, see Plaintiffs' Mem. at 22-23; AR:LIT-2048; AR:LIT-1660; Kern Cnty. Farm Bureau v. Allen, 450 F.3d 1072, 1080-81 (9th Cir. 2006) ("FWS cannot ignore available biological information" under ESA) (quotations and citation omitted).

Instead, FWS's counsel offers an argument found nowhere in the withdrawal decision itself—that Inman's habitat capacity estimates indicate sufficient unoccupied denning habitat exists "even assuming that wolverines will not expand

out of their current range." Fed. Mem. at 23; cf. AR:FR-14 (withdrawal decision finding sufficient unoccupied denning habitat based on estimated capacity of Colorado and California habitats outside wolverine's current range). Not only does this argument impermissibly seek to substitute "counsel's post hoc rationalizations" for the agency's stated reasoning, Burlington Truck Lines, 371 U.S. at 168, but it too "fail[s] to consider an important aspect of the problem," Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983): Inman estimated that the northern Rockies and north Cascades could accommodate 99 more wolverines, or 417 total. AR:LIT-1659.[5] FWS's brief offers no explanation why unoccupied habitat for 99 wolverines along the fringes of these two areas would sufficiently buffer "a [habitat] loss of 31%, much less the 64% losses projected for 2085" throughout the entire range of the DPS—and FWS's staff biologists concluded that it would not. AR:FR-5616-17 (Asst. Reg'l Dir.'s Memo).

FWS nevertheless claims it did consider likely climate-change impacts on wolverine habitat in the foreseeable future, Fed. Mem. at 23, but cites only to further irrational determinations: (1) FWS invokes McKelvey, et al. (2011)'s projection that "'large (>2000km^2) contiguous areas of wolverine habitat are

[5] FWS inaccurately reports that Inman calculated habitat capacity for 427 wolverines, Fed. Mem. at 22; the correct total is 417, AR:LIT-1659.

predicted to persist'" even after 2085, Fed. Mem. at 23 (quoting AR:FR-15), but ignores McKelvey's admonition that such areas suffice for only "short-term population persistence," AR:LIT-2580; and (2) FWS relies on its own calculations that "'the predicted habitat remaining after 2085'" could support 283 wolverines in the northern Rockies, Fed. Mem. at 23 (quoting AR:FR-15), but fails to justify overlooking such essential considerations as sizes of remaining habitat patches and distances between them, omission of which creates the "'potential to over-predict'" population numbers according to the best available science, Plaintiffs' Mem. at 33-34 (quoting AR:LIT-1657).[6]

Third, FWS doubles down on its effort to impeach McKelvey, et al. (2011), relying heavily on a comment submitted by Dr. Stephen Torbit of the agency's regional Science Applications office to suggest that climate-driven snowpack losses may be less than McKelvey projected. Fed. Mem. at 17-18, 25; see AR:FR-5361; AR:FR-5453. But Torbit addressed "future snowpack conditions for the upper Colorado River Basin" and acknowledged that "no comparable assessment is

[6] FWS admits that it is "'95 percent confident' that the future population will fall within" the range of 110-347, but argues that the "calculation estimate" is 283 wolverines. Fed. Mem. at 33. However, the broad range of the confidence interval limits the conclusions that can rationally be drawn from that "calculation estimate." FWS cannot ignore a possible population decline to 110 wolverines, "especially given the ESA's policy of institutionalized caution." Greater Yellowstone Coal. v. Servheen, 665 F.3d 1015, 1030 (9th Cir. 2011) (quotations and citation omitted).

currently available to describe future precipitation (snowfall) patterns for the DPS proposed in the listing recommendation." AR:FR-5453; see also id. 5457-5514 (Colorado report referenced by Torbit). Snow experts on FWS's science panel "cautioned" that Torbit's data "were for CO and CA … and that the majority of occupied range in WY, ID, and MT had strong evidence of dramatic decreases in snow." AR:FR-3928 (emphasis added). Indeed, while FWS claims its science panel "raised concerns" with McKelvey's "snow cover projections," Fed. Mem. at 25, any such "concerns" stemmed only from the panel's view that long-term snow loss will be worse than McKelvey projected, see AR:FR-14022-23; AR:FR-5614. FWS urges that it "is permitted to decide among competing scientific opinions," Fed. Mem. at 26, but not without rational explanation; FWS offered no rational explanation for weighing Dr. Torbit's inapplicable Colorado Basin information more heavily than the McKelvey and science panel data addressing the heart of the DPS in Montana, Idaho, and Wyoming.

FWS also cites agency correspondence with McKelvey, claiming McKelvey admitted that his data "lack[] adequate detail at the scale of wolverine landscapes." Fed. Mem. at 25. However, McKelvey actually stated that the scale of his data "makes sense when using the data for [a] listing decision that rests on continent-scale habitat loss," and commented only that finer-scale and updated data are needed to support FWS's post-listing decisions to designate specific parcels as

wolverine critical habitat pursuant to 16 U.S.C. § 1533(a)(3). AR:PR-13432-33 (emphasis added).

Similarly, while FWS quotes McKelvey's statement that "'we do not know how fine scale changes in snow patterns within wolverine home range may affect population persistence,'" Fed. Mem. at 24 (quoting AR:LIT-2581), FWS fails to acknowledge that McKelvey made this statement to launch a discussion suggesting that reduced snowfall specifically could impact documented wolverine reliance on avalanche chutes for denning and foraging by changing "avalanche frequency," with potentially "significant effects on wolverine habitat quality," AR:LIT-2581. This discussion does not undermine McKelvey's analysis.

Further, FWS cites nothing to support its speculation that wolverine denning choices are made at a scale finer than the 500-square-meter resolution of the McKelvey analysis (the withdrawal decision stated that "[i]t is unclear how much habitat wolverines need for denning purposes," AR:FR-6), and offers no response to substantial contrary evidence demonstrating that wolverines do not den in "microclimates" of discontinuous snow cover despite the widespread availability of such conditions, see Plaintiffs' Mem. at 25-26, 28.

Fourth, FWS fails to justify its insistence that massive snow losses cannot warrant listing absent proof of the precise causal mechanism for the wolverine's snow dependence, see AR:FR-14, even though the best available science

establishes that "a critical feature of wolverine denning habitat is dependability of deep snow throughout the denning period," AR:LIT-2312 (Magoun & Copeland (1998)). FWS claims Magoun & Copeland's conclusion is not the best available science because it has "been discredited by the lead author herself." Fed. Mem. at 29. But FWS alters the author's quoted statement to make this argument: While Magoun indeed stated that "we hopefully have progressed further in our knowledge of wolverines" since her 1998 study, she continued: "That being said, I have made few revisions in my thinking since that paper was published regarding what we can conclude about wolverines and denning without more data on den selection and kit survival." AR:PI-1363 (emphasis added). FWS's brief transforms the underscored language to "a few revisions," which dramatically changes the sentence's meaning. Fed. Mem. at 30.[7]

FWS also rejects its biologists' conclusion that, given the wolverine's need for deep, persistent snow for reproductive denning, "any conclusion that there will not be population effects" from climate change "would not represent the best available scientific or commercial data." AR:FR-5614. FWS claims this

[7] Magoun clarified that "deep snow" could include remnant snowdrifts by May 15 and the "denning period" concludes by April 30. AR:PI-1363. Magoun also explained her "evolved" thinking that "deep snow" means a minimum snow depth of 70 centimeters and a denning female's need for snow for "thermal protection" may conclude by April 15, depending on local conditions. Id. 1363-64. These clarifications do not "discredit" Magoun & Copeland (1998).

conclusion was uninformed by the Torbit snow-retention analysis, Fed. Mem. at 29, but, as discussed supra, FWS failed to rationally explain why Torbit's information on likely snowpack retention in the Colorado Basin offered the best available science concerning likely snowpack retention in Montana, Idaho, and Wyoming, where wolverines actually live—especially when FWS's own chosen snow experts deemed the Colorado and California data inapplicable. See AR:FR-3928.

B. Year-Round Wolverine Habitat

In attempting to rehabilitate its rejection of the Copeland, et al. (2010) delineation of year-round wolverine habitat, FWS asserts that it offered "just a true observation" by asserting in the withdrawal decision that Copeland "does not consider several available datasets." Fed. Mem. at 31; AR:FR-14. FWS thus fails to explain why Copeland's omission of admittedly "biased" trapping and anecdotal records, AR:FR-5, and admittedly "irrelevant" lowland boreal forest observations from eastern Canada, AR:FR-7, offered any rational basis for rejecting Copeland's conclusions, see Plaintiffs' Mem. at 31-32.

FWS nevertheless claims that further support for rejecting Copeland, et al. (2010) exists in unspecified portions of the same paragraph from its withdrawal decision, as well as in its Regional Director's May 2014 memo and the science panel report. Fed. Mem. at 32. But the only additional reasoning offered in these

materials describes independent modeling exercises confirming that wolverines "generally use" areas featuring, inter alia, "more snow" and "snow cover persisting into the spring," AR:FR-14; accord AR:FR-5366—which is consistent with Copeland. While FWS went on to note that Inman's 2013 exercise "used snow cover on April 1, not snow cover until May 15, as a variable in their best fitting model," AR:FR-14, this is a distinction without a difference because Inman explained that April 1 snow cover "generally coincides with maximum snow depth for the year," which provides "long-lasting snow cover" that is also central to Copeland's analysis, AR:LIT-1655. As for FWS's science panel, six of nine panelists "indicated their beliefs that wolverines tended toward having an obligate relationship with contiguous snow at the home range and species' range scales." AR:FR-5613; see AR:FR-14020, 14045. FWS offered no explanation why it chose to follow the minority, rather than the majority, view.

Similarly, although FWS relies on a finding that "'wolverines also use areas outside of the area covered with snow until May 15,'" Fed. Mem. at 17 (quoting AR:FR-15), this finding rests on the 5 percent of summer and 14 percent of winter wolverine location records that fell outside Copeland's snowy "bioclimatic envelope," rather than the 95 percent of summer and 86 percent of winter locations that fell within it. AR:LIT-987. Again, FWS chose, without rational explanation, to rely on the outliers rather than the weight of scientific evidence.

Nor does FWS offer any legitimate support for its finding that "wolverines are capable of traversing great lengths, thus ameliorating" increased habitat fragmentation caused by climate change, AR:FR-15—a finding that defied FWS's own admission that "the probability of making such movements decreases with increased distance between suitable habitat patches," id. 18; see Plaintiffs' Mem. at 35-36. FWS now claims this admission "does not contradict the determination that there is an unacceptable level of uncertainty" that habitat connectivity will become too attenuated. Fed. Mem. at 34. But FWS's withdrawal decision said "it is reasonable to predict that if observed warming trends continue … and areas with deep snow become smaller and more isolated, connectivity and genetic exchange among wolverine populations will decrease over time." AR:FR-15 (emphases added, citations omitted). Given this admittedly "reasonable" prediction of decreased genetic exchange, id., and that genetic exchange among DPS subpopulations is already too low for "short-term maintenance of genetic diversity," id. 22, this threat alone justifies invalidation of the withdrawal decision.[8]

[8] FWS claims Plaintiffs' argument on this point is "a bridge too far" because there is "no evidence" that the wolverine's low effective population size results from "habitat fragmentation" rather than "founder effects" following a likely early-20th-century extirpation. Fed. Mem. at 34. But FWS's withdrawal decision itself states that the wolverine's reduced genetic diversity "is likely a result of the fragmented nature of wolverine habitat in the United States." AR:FR-22; accord AR:LIT-673 (Cegelski, et al. (2006)).

IV. FWS'S REMAINING ARGUMENTS ARE MERITLESS

FWS dismisses intended and incidental trapping of wolverines as a threat to the DPS based on Montana's reduced trapping quotas. Fed. Mem. at 37-38. But, as FWS's own biologists counseled, "even small numbers of mortalities are likely to be problematic when habitat and populations are contracting due to climate change." AR:FR-5611. Further, although FWS argues there is no evidence that loss of wolverines to trapping will affect the DPS's "genetic diversity," Fed. Mem. at 38, FWS itself stated that "[d]ispersal between populations is needed to avoid further reduction in genetic diversity," AR:FR-18, and the best available science shows that "young, inexperienced males" who are the most likely dispersers are also disproportionately lost to trapping, AR:LIT-1984-85 (Krebs, et al. (2004)). FWS failed to consider this issue.

FWS also failed to rationally consider the threat that expanding infrastructure will block essential wolverine dispersal. FWS argues that the best available science does not document current infrastructure interference with wolverine dispersal—except for the Trans Canada Highway. Fed. Mem. at 35-36. But FWS failed in its duty to "project future scenarios" of infrastructure development "to reasonably forecast the conservation status of the species within the foreseeable future," as the ESA requires. AR:FR-10; 16 U.S.C. § 1532(20). Indeed, although, as FWS notes, Inman, et al. (2013) found no indication that

human development is currently limiting wolverine dispersal, Fed. Mem. at 35, Inman added that, given the "negative relationship" between road density and wolverine occurrence, "it is reasonable to assume that willingness to disperse through developed areas and/or survival of dispersers moving through developed areas would be impacted by increasing road and housing densities at some point," AR:LIT-1660-61. FWS failed to consider whether, in the foreseeable future, expanding infrastructure will—as the Trans Canada Highway already does—impede essential wolverine dispersal.

Finally, FWS argues that it reasonably deemed the wolverine DPS not threatened throughout "a significant portion of its range" despite finding the DPS's current range to encompass the entire southern Rocky Mountains and Sierra Nevada regions occupied by only single male wolverines, with no prospect of female colonization. Fed. Mem. at 46-48. FWS claims these areas are not a "significant portion" of the DPS because they contain no "viable breeding populations" and, even without wolverines in these areas, the DPS would not be threatened with extinction. Id. However, FWS relied on expected population expansion into these areas as one of three enumerated reasons why the DPS is not threatened by climate change, stating that expansion into areas "not currently occupied and/or occupied with a few individuals" could "support a wolverine population twice as large as that at present." AR:FR-16. This population-

expansion hypothesis was spurious for the reasons stated supra, but regardless FWS cannot rationally rely on population expansion into the southern Rockies and Sierra Nevada as a bulwark against climate change while simultaneously deeming these areas insignificant to the "viability of the species" in its "significant portion" analysis. AR:FR-24-25.[9]

[9] FWS claims it did not rely on expansion into these areas for its own "future habitat calculations," Fed. Mem. at 47 n.7, but those calculations excluded only the Sierra Nevada and Oregon—not the southern Rockies, AR:FR-15. Further, FWS heavily relied on habitat capacity estimates in Inman, et al. (2013), that included both the Sierra Nevada and the southern Rockies. See AR:FR-14; AR:LIT-1659.

Respectfully submitted this 25th day of September, 2015.

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