IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
MISSOULA DIVISION

DEFENDERS OF WILDLIFE,

Plaintiff,

vs.

SALLY JEWELL, Secretary, U.S. Department of the Interior, in her official capacity; DANIEL M. ASHE, Director, U.S. Fish and Wildlife Service, in his official capacity,

Defendants,

and

IDAHO FARM BUREAU FEDERATION; WYOMING FARM BUREAU; MONTANA FARM BUREAU FEDERATION; WASHINGTON FARM BUREAU, IDAHO STATE SNOWMOBILE ASSOCIATION; COLORADO SNOWMOBILE ASSOCIATION; COLORADO OFF-HIGHWAY

CV 14–246–M–DLC

(Consolidated with Case Nos. 14–247–M–DLC and 14–250–M–DLC)

ORDER

VEHICLE COALITION; AMERICAN PETROLEUM INSTITUTE; MONTANA PETROLEUM ASSOCIATION; WESTERN ENERGY ALLIANCE; GOVERNOR C.L. "BUTCH" OTTER; STATE OF MONTANA; MONTANA FISH, WILDLIFE AND PARKS; and STATE OF WYOMING,

Defendant-Intervenors.

Before the Court are seven motions for summary judgment filed in these three consolidated cases: one filed by the plaintiffs in CV 14-246-M-DLC and CV 14-247-M-DLC; one filed by the plaintiffs in CV 14-250-M-DLC; two cross-motions filed by the government; and three cross-motions filed by the three groups of defendant-intervenors. The Court heard several hours of thorough and thought-provoking oral argument on February 9, 2016, and the undersigned greatly appreciates the quality of both the oral presentations and the briefing in this complicated matter. For the reasons explained below, the Court grants the motions in part and denies them in part; vacates the United States Fish & Wildlife Service's (the "Service") August 13, 2014 withdrawal of its proposed rule to list the distinct population segment of the North American wolverine as threatened under the Endangered Species Act ("ESA"); and remands this matter to the Service for further consideration consistent with this order.

BACKGROUND

I. The wolverine

Sometimes referred to as the "mountain devil," the North American wolverine, *Gulo gulo luscus*, is the largest terrestrial member of what is commonly known as the weasel family. (PR-00734.[1]) Resembling a small bear, female wolverines weigh between 17 and 26 pounds, while males range between 26 and 40 pounds. (*Id.*) Compact, stout, and uncannily strong, the wolverine has been known to kill prey many times its size, including mature bull moose. Historically, the wolverine has assumed a mythical reputation. At the beginning of Chapter One of *The Wolverine Way*, author Douglas H. Chadwick cites to the following from Ernest Thompson Seton's *Lives of Games Animals: Vol. II, 1925-1927*:

> The wolverine is a tremendous character . . . a personality of unmeasured force, courage, and achievement so enveloped in a mist of legend, superstition, idolatry, fear, and hatred, that one scarcely knows how to begin or what to accept as fact. Picture a weasel – and most of us can do that, for we have met the little demon of destruction, that small atom of insensate courage, that symbol of slaughter, sleeplessness, and tireless, incredible activity – picture that scrap of demoniac fury, multiply that mite by some fifty times, and you have the likeness of a wolverine.

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1. Citations to the administrative record consist of an index reference (e.g. "FR" for the Final Rule Index, "PI" for the Public Involvement Index) and page number within the index. Thus, "PI-001258" references page 1,258 of the Public Involvement Index.

Douglas H. Chadwick, *The Wolverine Way* 15 (Patagonia Books 2010).

The wolverine is custom-built for life in mountainous, snowy environments, and relies upon snow for its existence at the most fundamental level. Physiologically, the wolverine exhibits a number of snow-adapted traits, including a lower threshold of thermoneutrality at -40° C; dense, hydrophobic, frost-resistant hair; and very low foot loadings, due to its disproportionately large paws. (PI-001258.) Wolverines move effortlessly through deep snow and steep terrain – scientists observed one intrepid radio-collared individual travel eleven kilometers in four hours, gaining over 2,000 feet in elevation to summit an 8,000 foot mountain in Montana's Glacier National Park. (LIT-000948-50.)

The wolverine displays an "obligate" relationship with snow for natal denning purposes, meaning, quite simply, the wolverine requires snow in order to reproduce. Scientists have posited a number of explanations for this relationship – thermal protection and/or predator shielding for newborn kits, food caching – but, regardless of the reason, there is consensus that the relationship is obligate at the den scale. (FR-05609.) Female wolverines excavate reproductive dens down into the snowpack, and therefore tend to choose areas where snow persists through the denning season at a minimum depth of five feet. (PR-00734.) Dens consist of tunnels containing well-used runways and bed sites, and may naturally incorporate

shrubs, rocks, and downed logs as part of the den structure. (*Id.*) The requirement of cold, snowy conditions means that, in the southern portion of the species' range, including the United States, where ambient temperatures are warmest, wolverine distribution is restricted to high elevations. (PR-00735.) To say that wolverine den sites tend be off the beaten path is an understatement – in Idaho, natal den sites occur above 8,200 feet, often in north-facing boulder talus fields or subalpine glacial cirques in forest openings; in Montana, natal dens occur above 7,874 feet and are located on north aspects in avalanche debris. (PR-00734.) Throughout its worldwide circumboreal range, the wolverine depends on persistent spring snow cover to reproduce – despite ubiquitous alternative denning structure within its distribution, no wolverine has ever been observed denning anywhere but in snow. (PR-00735-36.)

By age three, nearly all female wolverines become pregnant every year, but approximately half of all wolverine pregnancies terminate annually. (PR-00734.) Pregnant females commonly resorb or spontaneously abort litters prior to giving birth, perhaps to preserve resources to increase reproductive success in subsequent years, or because of low food availability. (*Id.*) Studies suggest that in many places in the range of wolverines, it may take two years of foraging for a female to store enough energy to successfully reproduce. (*Id.*) Due to the combination of

these factors, it is likely that actual rates of successful reproduction in wolverines are among the lowest known for mammals. (*Id.*)

While the reclusive nature of the wolverine makes it nearly impossible to know for certain, it is estimated that no more than 300 individuals live in the contiguous United States. (FR-00022.) Wolverines most likely exist in this country as a metapopulation: a population composed of a network of semi-isolated subpopulations, each occupying a suitable patch of habitat in a landscape of otherwise unsuitable habitat. (PR-00735.) Metapopulations require some level of regular or intermittent migration and gene flow among subpopulations, in which individual subpopulations support one-another by providing genetic and demographic enrichment through mutual exchange of individuals. (*Id.*) If metapopulation dynamics break down, i.e. the influx of individuals and corresponding genetic diversity from other subpopulations is disrupted, either due to changes within subpopulations or loss of connectivity, an entire metapopulation may be jeopardized due to subpopulations becoming unable to persist in the face of inbreeding or demographic and environmental stochasticity. (*Id.*) Due to temperature constraints associated with the lower latitudes of its distribution, the wolverine metapopulation in the contiguous United States consists of a network of small subpopulations on mountain tops, some containing less than ten individuals.

(*Id.*) For the metapopulation to persist under these circumstances, individuals must cycle between subpopulations. Studies demonstrate that, during dispersal movements, wolverines prefer to move across suitable habitat, as defined by persistent spring snow cover, rather than across unsuitable habitat. (*Id.*)

Wolverines carve out relatively large home ranges for animals of their size. Females, whose ranges are likely tied to the availability of food, maintain an average home range of 148 square miles in central Idaho, 55 square miles in Glacier national Park, and 128 square miles in the Greater Yellowstone region. (*Id.*) Males, whose ranges likely depend on breeding opportunities, maintain an average home range of 588 square miles in central Idaho, 193 square miles in Glacier National Park, and 311 square miles in the Greater Yellowstone region. (PR-00735.) Thus, with range area requirements of this size, habitat islands are necessarily able to support only a limited number of wolverines, before range overlap becomes unacceptable. Within areas with known wolverine populations, relatively few wolverines can coexist due to these naturally low population densities, even if all areas were occupied at or near carrying capacity. (PR-00736.)

In sum, as aptly described by Plaintiffs' counsel during the February 9, 2016 motions hearing, the wolverine is a relic of the northern hemisphere's last ice age,

and it survives in very low numbers in those limited areas in the contiguous United States where ice age-like conditions persist. The wolverines's sensitivity to climate change, in general, cannot really be questioned. In fact, many believe, similar to the polar bear, that the wolverine may serve as a land-based indicator of global warming. However, as explained in detail in this order, general supposition does not drive a listing determination under the ESA.

II. Listing history of the wolverine under the ESA: 1994 - 2013

The effort to list the wolverine as a threatened or endangered species began over twenty years ago, and has continued unabated since that time. On August 3, 1994, the Predator Project and Biodiversity Legal Foundation filed a petition with the Service to list the wolverine in the contiguous United States under the ESA. On April 19, 1995, the Service published a finding that the petition "did not provide substantial information indicating that listing the wolverine in the contiguous United States may be warranted." (PR-00733.)

In July 2000, the Biodiversity Legal Foundation, Predator Conservation Alliance, Defenders of Wildlife, Northwest Ecosystem Alliance, Friends of the Clearwater, and Superior Wilderness Action Network filed with the Service a second petition to list the wolverine and designate critical habitat for the species. On October 21, 2003, the Service again rejected the petition, finding that the

petitioners "failed to present substantial scientific and commercial information indicating that listing may be warranted." (*Id.*) Defenders of Wildlife, Friends of the Clearwater, Klamath-Siskiyou Wildlands Center, and Northwest Ecosystem Alliance then sued the Service, alleging in part that the Service relied on its own internal standard for determining "substantiality," rather than the standard articulated in the governing regulations. *See Defenders of Wildlife v. Kempthorne*, CV 05-99-M-DWM, Order at 12-13 (D. Mont. Sept. 29, 2006). This Court subsequently ruled that the Service's 90-day petition finding was in error and ordered the Service to submit to the Federal Register a 12-month finding for the wolverine by September 29, 2007. By order dated April 19, 2007, the Court extended the deadline for filing the 12-month finding to February 28, 2008.

On March 11, 2008, the Service published a 12-month finding of ''not warranted'' for the wolverine in the contiguous United States. (PR-00733 (citing 73 Fed. Reg. 12,929 et seq.).) The Service "determined that the contiguous United States population of the North American wolverine does not constitute a distinct population segment [("DPS")] under the [ESA] and therefore a listable entity unto itself," and "that the contiguous United States population of the North American wolverine is not a significant portion of the range of the North American subspecies and does not warrant further consideration under the [ESA]." 73 Fed.

Reg. 12,929, 12,941 (March 11, 2008). Then, on September 30, 2008, Defenders of Wildlife and eight other plaintiffs filed a complaint in this Court seeking to set aside and remand the 12-month finding to the Service for reconsideration, based in part upon the Service's failure to "address[] the question whether the wolverine population in the lower-48 United States constitutes an endangered or threatened species due to small effective population size." *Defenders of Wildlife v. Kempthorne*, CV 08-139-M-DWM, Compl. at 19 (D. Mont. Sept. 30, 2008). The Service then agreed to settle the case by voluntarily remanding the 12-month finding and issuing a new 12-month finding by December 1, 2010. Following the settlement agreement, the Court dismissed the case on June 15, 2009 and ordered the Service to comply with the parties' stipulations.

On April 15, 2010, the Service published a Notice of Initiation of a 12-month finding for wolverines in the contiguous United States. (PR-00734 (citing 75 Fed. Reg. 19,591 et seq.).) The Service published its finding on December 14, 2010, and "determined that the wolverine in the contiguous United States constituted a [DPS] and that the DPS warranted listing under the [ESA], but that listing was precluded by higher priority listing actions." (*Id.* (citing 75 Fed. Reg. 78,030).)

On July 12, 2011, the Service reached a settlement with the Center for

Biological Diversity, one of the plaintiffs in *In re Endangered Species Act Section 4 Deadline Litigation*, 1:10-mc-377-EGS (D. DC), whereby the Service agreed to submit for publication in the Federal Register, no later than the end of the 2013 fiscal year, either a proposed listing rule for the wolverine or a withdrawal of the warranted 12-month finding. Prior to the stipulated publication, on April 13, 2012, Cottonwood Environmental Law Center, Footloose Montana, and Biodiversity Conservation Alliance filed an action before the undersigned challenging the Service's December 14, 2010 warranted-but-precluded finding for the wolverine. *See Cottonwood Envtl. Law Ctr. v. Salazar*, CV 12-57-M-DLC (D. Mont.). On September 20, 2012, the Court granted the Service's motion to stay the case based on the Service's representation to the Court that it expected to submit a proposed rule or withdrawal to the Federal Register by January 18, 2013. Thereafter, on February 8, 2013, the plaintiffs moved to voluntarily dismiss their Complaint following the Service's publication of a rule proposing to list the wolverine DPS as a threatened species under the ESA and establishing a non-essential experimental population in Colorado, Wyoming, and New Mexico (the "Proposed Rule").

The defining analyses and conclusions in the Proposed Rule related to projected impacts of climate change on wolverine habitat. To that end, the Service

relied on two studies – Copeland (2010)[2] and McKelvey (2011).[3] Copeland (2010) "propose[d] a fundamental geographic distribution for the wolverine based on the hypothesis that the occurrence of wolverines is constrained by their obligate association with persistent spring snow cover for successful reproductive denning and by an upper limit of thermoneutrality." (LIT-00981.) To develop this distribution, the authors compared and correlated two data layers, configuring the first to, in the end, match the second as closely as possible .

The first layer described spring snow cover. The authors developed this layer by compositing over 12,000 satellite images of the northern hemisphere taken between April 24th and May 15th in each of the years 2000 to 2006. The authors chose this period because it "generally corresponds to the period of wolverine den abandonment . . . and is consistent with the time period used [in an earlier study] to correlate historical occurrence records with spring snow cover." (LIT-00983.) Each pixel[4] in these images was classified as either snow, bare

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2. J.P. Copeland et al., *The bioclimatic envelope of the wolverine (Gulo gulo): do climatic constraints limit its geographic distribution?*, 88 Canadian J. Zoology, 2010, 233-246 [hereinafter Copeland (2010)].

3. Kevin S. McKelvey et al., *Climate change predicted to shift wolverine distributions, connectivity, and dispersal corridors*, 21 Ecological Applications, no. 8, 2011, 2882-2897 [hereinafter McKelvey (2011)]..

4. The satellite imagery used in the Copeland (2010) study had a 500-meter resolution, meaning that each constituent pixel in a given image measured 500 meters on a side and one-half square kilometer in area.

ground, cloud, or night. If a pixel carried the bare ground spectral signature at any time during the 21-day period in a given year, the authors conservatively excluded the pixel from the snow cover data layer for that year. The authors "then summed all annual snow layers for the [seven]-year period to create a coverage that depicted the number of years out of [seven] that each pixel was classified as snow" for the 21-day period. (*Id.*) If, as wolverine biological research suggested, the wolverine requires persistent spring snow for denning and reproduction, then a data layer depicting areas that retained snow through the denning period in at least one out of seven years would, theoretically, depict all potential wolverine denning habitat in the northern hemisphere during those seven years.

The second layer was more straightforward, and served a ground-truthing function. The authors developed this layer by mapping "spatial information for 562 wolverine reproductive den sites representing all verified dens in North America . . . and Finland . . . and dens from 2000 to 2006 in Norway and from 2003 to 2006 in Sweden." (LIT-00986.) The purpose of the second layer was to assess the fit between the first layer, which showed potential wolverine denning habitat, and actual historical observations. When the authors compared the model described in the first layer with the observed data described in the second layer, they discovered that 97.9% of the historical den sites occurred within pixels in the

first layer which registered as snow covered in at least one out of the seven years. In Scandinavia and North America, the comparison suggested that wolverines statistically preferred areas classified as snow-covered in *six* out of seven years for siting dens; indeed, in North America, 69% of wolverine dens occurred in such pixels. Importantly, of the twelve observed dens in the northern hemisphere not captured by the snow layer, further investigation revealed that the dens were located in snow, but the pixels where the dens were located did not meet the strict classification requirements described above. Furthermore, nowhere in Copeland (2010) did the authors suggest that wolverines require spring snow coverage until May 15 – they simply chose this date because "it roughly corresponded to the end of the peak of the weaning period and the end of reproductive denning." (PI-001259.)

The Copeland (2010) authors conducted this study in order to develop a picture of wolverine distribution based not in field observation, which is very difficult for this species, but by "using climatic conditions as explanatory variables for reproductive den site selection and year-round habitat use." (LIT-00992.) The authors concluded that the "strong concordance of wolverine den sites with the spring snow coverage [data layer] clearly reflects an obligatory relationship with snow cover for reproductive dens," and that "the denning requirements of the

wolverine primarily determine the limits of its circumboreal range." (*Id.*) In light of the latter conclusion, the authors stated the following with regard to climate change:

> If wolverine distribution in southern regions can be delineated reliably by persistent spring snow cover, climate driven reductions in the size and connectivity of these areas may signal associated range losses for the wolverine. Significant reductions in spring snow cover associated with climatic warming have already occurred in some portions of the wolverine's range in the contiguous [United States] . . . . If these trends continue, habitat conditions for the wolverine along the southern extent of its circumboreal range will likely be diminished through reductions in the size of habitat patches and an associated loss of connectivity, leading to a reduction of occupied habitat in a significant portion of the species range.

(LIT-00992.)

McKelvey (2011), the second cornerstone of the Proposed Rule, picked up where Copeland (2010) left off. Recognizing the Copeland (2010) authors' conclusion that "persistent spring snow cover provided a good fit to current understandings of the wolverine's circumboreal range," the McKelvey (2011) authors started with the premise that "areas with spring snow cover that supported reproduction . . . could also be used to predict year-round habitat use, dispersal pathways, and both historical . . . and current ranges." (LIT-02569.) The

McKelvey (2011) authors hypothesized that "[i]f . . . the extent of persistent spring snow cover has constrained current and historical distributions, then it is reasonable to assume that it will also constrain the wolverine's future distribution," and that, "for conservation planning, predicting the future extent and distribution of persistent spring snow cover can help identify likely areas of range loss and persistence, and resulting patterns of connectivity." (*Id.*)

The authors sought to make this prediction based on regional snow modeling. First, the authors surveyed the approximately twenty available global climate models ("GCMs"), and, as recommended by the Intergovernmental Panel on Climate Change, chose to ensemble-average ten of the GCMs in order to "more faithfully reproduce existing patterns of climate change." (*Id.*) The authors chose the ten GCMs based on their regional historical performance, meaning they included GCMs which accurately modeled past conditions in the study area.[5] The McKelvey (2011) authors then chose an emissions scenario to apply to the ensembled GCMs. While there are over forty such scenarios, the authors identified the four most commonly employed, and ultimately applied a mid-range

5. The study area in McKelvey (2011) was smaller than the circumboreal reach of the distribution model from Copeland (2010). McKelvey (2011) modeled snowpack over southern portions of Alberta and British Columbia, Canada; throughout Arizona, Montana, Washington, and Wyoming; through most of Idaho and Oregon; and through significant portions of western Colorado and eastern Utah. (*See* LIT-02571). The study area corresponded with the Columbia, Upper Missouri, and Upper Colorado river basins.

to conservative scenario.[6] Then, in order to translate the relatively coarse-scale GCM outputs to a scale appropriate for estimating snowpack, the authors downscaled the GCMs to one-sixteenth of a degree of latitude and longitude "using the 'delta' method [], which assumes that local relationships, such as relative shifts in temperature and precipitation associated with elevation and prevalent weather patterns, remain constant." (LIT-02570.) The authors then applied a hydrologic model to the GCMs, which "produce[d] variables of hydrological interest including snow water equivalent [] and snow depth." (*Id.*) Finally, the authors "cross-walk[ed]" the GCM outputs to the scale of the satellite imagery used in Copeland (2010) in order to render their snowpack predictions relevant to the distribution model developed in that earlier study. (LIT-02571.)

The results of the modeling in McKelvey (2011) were significant, but not surprising. First, the ensembled GCMs predicted that as of 2045, the study area would retain only 67% of its historic spring snow cover. As of 2085, that number was reduced to 37% of historical norms. The authors found that, "[g]iven a warming trend, spring snow cover is expected to decline and snow-covered areas

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6. The four most common scenarios are: (1) A2, representing heavy use of fossil fuels; (2) A1B, reflecting a rapidly growing economy but with significant movement toward renewable power sources; and (3) B1 or B2, which represent more conservative scenarios associated with organized efforts to reduce emissions worldwide. (LIT-02569-70.) The McKelvey (2011) authors applied the A1B emissions scenario to the averaged GCMs.

are expected to become more fragmented and isolated," which could "create many small and isolated [wolverine] populations that would be subject to high levels of demographic and genetic stochasticity." (LIT-02579-80.) The authors noted several study limitations, including: (1) the "delta" downscaling approach employed in the analysis can lead to *underestimates* of local changes in climate, meaning that the predicted reductions in spring snowpack are likely *conservative*; and (2) "[a]lthough wolverine distribution is closely tied to persistent spring snow cover . . . , [the authors] do not know how fine-scale changes in snow patterns within wolverine home ranges may affect population persistence." (LIT-02581.) Ultimately, the McKelvey (2011) authors concluded that they "expect . . . the geographic extent and connectivity of suitable wolverine habitat in western North America [to] decline with continued global warming," and that if their "scenarios are valid, then conservation efforts should focus on maintaining wolverine populations in the largest remaining areas of contiguous habitat and, to the extent possible, facilitating connectivity among habitat patches." (LIT-02582.)

Based upon Copeland (2010) and McKelvey (2011), the latter of which the Service referred to as both the most sophisticated and "best available science for projecting the future impacts of climate change on wolverine habitat" (PR-00744), the Service came to the following conclusions in the Proposed Rule:

> The primary threat to the [wolverine] is from habitat and range loss due to climate warming . . . . Wolverines require habitats with near-arctic conditions wherever they occur. In the contiguous United States, wolverine habitat is restricted to high-elevation areas in the West. Wolverines are dependent on deep persistent snow cover for successful denning, and they concentrate their year-round activities in areas that maintain deep snow into spring and cool temperatures throughout summer. Wolverines in the contiguous United States exist as small and semi-isolated subpopulations in a larger metapopulation that requires regular dispersal of wolverines between habitat patches to maintain itself. These dispersers achieve both genetic enrichment and demographic support of recipient populations. Climate changes are predicted to reduce wolverine habitat and range by 31 percent over the next 30 years and 63 percent over the next 75 years, rendering remaining wolverine habitat significantly smaller and more fragmented. [The Service] anticipate[s] that, by 2045, maintenance of the contiguous United States wolverine population in the currently occupied area may require human intervention to facilitate genetic exchange and possibly also to facilitate metapopulation dynamics by moving individuals between habitat patches if they are no longer accessed regularly by dispersers, or risk loss of the population.
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> Other threats are minor in comparison to the driving primary threat of climate change; however, cumulatively, they could become significant when working in concert with climate change if they further suppress an already stressed population. These secondary threats include harvest (including incidental harvest) . . . and demographic stochasticity and loss of genetic diversity due to small effective population sizes . . . . All of these factors affect wolverines across their current range in the

contiguous United States.

(PR-00754.) The Service further found that the wolverine DPS "presently meets the definition of a threatened species due to the likelihood of habitat loss caused by climate change resulting in population decline leading to breakdown of metapopulation dynamics," and, accordingly, proposed listing the wolverine as threatened under the ESA. (*Id.*) Interestingly, no doubt sensing the potential for backlash, the Service included the following language in the Proposed Rule:

> A determination to list the contiguous United States DPS of the North American wolverine as a threatened species under the [ESA], if [the Service] ultimately determine[s] that listing is warranted, will not regulate greenhouse gas emissions. Rather, it will reflect a determination that the DPS meets the definition of a threatened species under the Act, thereby establishing certain protections for them under the ESA. While [the Service] acknowledge[s] that listing will not have a direct impact on the loss of deep, persistent, late spring snowpack or the reduction of greenhouse gases, [the Service] expect[s] that it will indirectly enhance national and international cooperation and coordination of conservation efforts, enhance research programs, and encourage the development of mitigation measures that could help slow habitat loss and population declines.

(PR-00755.)

III. Listing history following the Proposed Rule: February 2013 - July 2014

Within weeks of publishing the Proposed Rule, the Service and its partners

had drafted both a wolverine recovery plan and, in light of the Service's proposal to establish an experimental non-essential wolverine population in Colorado (*see* PR-00758 (citing 78 Fed. Reg. 7890 et seq.)), a translocation plan. Service staff at the local level communicated with regional level staff as to whether conferencing was required for government projects proposed within potential wolverine critical habitat. Indeed, the critical habitat designation process had begun by April 2013. In short, at this time, the Service was preparing a final rule to list the wolverine.

Predictably, the Service received a flood of comments in the months after it published the Proposed Rule. As of May 16, 2013, one week after the comment period closed, the Service had received 118,000 submissions from affected states, non-governmental organizations, and interested individuals. (FR-05986.) Of particular note were comments submitted by states in the western United States, and comments submitted by the seven wolverine experts from whom the Service specifically elicited remarks.

The State of Colorado, through its Parks & Wildlife Department, commented on the Proposed Rule on April 29, 2013. Colorado did not comment on the propriety of listing the wolverine, but was supportive of establishing a non-essential population within its borders, so long as the process for doing so remained flexible. (PI-012080.)

The State of Utah submitted comments through the Office of the Governor's Public Lands Policy Coordination Office on May 2, 2013. Utah decried the Service's use of "unvalidated climate models" that "are neither rigorous nor sufficiently scaled at a fine-scale level for evaluation of the threats necessary to support [a listing] decision" (PI-011987), and asserted that "[t]he global models employed and proposed as the 'best available science' are not precise enough to constitute a predictor of any actual threat to populations and metapopulations of wolverines at the landscape level." (PI-011988.)

The State of Alaska, through its Department of Fish & Game, commented on May 6, 2013. Similar to Utah, Alaska opposed the Proposed Rule because it "appears to follow the rationale used to list the polar bear and various species of ice seals: it is based on untested or unverified models that speculate on a species' possible future fate, rather than focusing on current population health and trends and immediate threats." (PI-003333.) Alaska further contended that "[t]he projected threats to the designated wolverine DPS are not immediate or severe, although they are potentially broad in scope," and that "because the population impacts these models predict are highly uncertain, it is not necessary to immediately list this species." (*Id.*)

The Idaho Office of Species Conservation, on behalf of the State of Idaho,

also submitted comments on May 6, 2013. Idaho asserted that the Service's DPS analysis was flawed, and that ESA protections are unnecessary nevertheless:

> First, the wolverine does not qualify as a DPS because the population is not discrete, and loss of the subspecies in the contiguous United States would not represent a significant gap in relation to its entire range, which includes areas within the contiguous United States, Canada, and Alaska. The population and habitat area in the lower 48 states represent a small fraction of the entire range; meaning that, for ESA purposes, the wolverine is insignificant when compared to the entire North American subspecies.
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> In addition, and perhaps more importantly, the ESA does not provide the wolverine with any additional substantive protection that cannot be provided by the states, and listing based solely on climate change does not allow the Service to develop a meaningful recovery plan for the species. The State of Idaho is well equipped to monitor and manage the species without federal protection, especially considering the fact that the ESA cannot halt climate change.

(PI-003176.)

The State of New Mexico, through its Department of Game & Fish, also submitted comments on the Proposed Rule on May 6, 2013. New Mexico did not take a position on listing the wolverine as threatened, but simply noted that "the proposal . . . is not applicable to New Mexico . . . due to the current absence of wolverine in the state and the lack of data indicating that the species was formerly

a resident." (PI-003135.) New Mexico did state its belief that, in the event of re-introduction of wolverine to Colorado and given the availability of suitable habitat in New Mexico, any wolverine located within its borders in the future would be considered part of the non-essential experimental population. (*Id.*)

The Nevada Department of Wildlife submitted comments on behalf of the State of Nevada on May 6, 2013 as well. Nevada first noted that the wolverine is a legally protected species within the state, and then articulated the following issues with the Proposed Rule: (1) neither Copeland (2010) nor McKelvey (2011) are sufficiently reliable studies to base the listing decision upon, (2) certain scientific studies suggest that the climate may simply be in a historically-recurring period of drought, similar instances of which the wolverine has survived as a species in the past, and (3) "using a climate model to predict possible future scenarios rather than current scientific data regarding wolverine population demographics for the decision-making processes could be potentially damaging to the future credibility of the [ESA]." (PI-003122.)

The State of Oregon, through its Department of Fish & Wildlife, also submitted comments on May, 6, 2013. Oregon found the proposed listing to be "very questionable," because "the wolverine population has increased dramatically and mortality from regulated trapping has been very low, and because "the

foundation on which the snow cover models are built do[es] not seem to be based on accurate ecological information, including whether persistent spring snow cover is actually obligatory for wolverine reproduction, and if so, the dates used to assess potential effects of climate change." (PI-003119.) In essence, and similar to Nevada, Oregon challenged the Service's reliance on Copeland (2010) and McKelvey (2011).

The State of Washington provided comments on the Proposed Rule on May 6, 2013 as well, through its Department of Fish & Wildlife. Washington first acknowledged its status as home to a documented resident wolverine population in the North Cascades, and cited information provided to it by the Service's North Cascades Wolverine Project. (PI-003097.) Washington did not oppose the listing conclusion in the Proposed Rule, but offered the following constructive comment related to the depth of analysis in a future final rule:

> Because climate change is the primary driver of the proposal to list the DPS, a more robust discussion regarding the uncertainty of the climate projections, and more importantly, how those predictions may impact the metapopulation dynamics, is warranted. Specifically, the Service should provide information that shows how reduced snow pack will directly impact the metapopulation by affecting genetic viability. As stated in the notice, the DPS consists of a network of small subpopulations that require movement across suitable and unsuitable habitat. While the timing of snow pack as

> it relates to denning may impact success of those den sites, overall genetic exchange may be reduced but could remain sufficient. If other factors resulting from loss of den sites play a strong role in the listing decision, they should be more fully explored. In addition, the Service should provide more information on how the threat of climate change is evaluated for the "foreseeable future" in regards to how wolverine meets the definition of "threatened."

(PI-003098-99.)

The State of Wyoming, through Governor Matthew Mead, submitted comments on the Proposed Rule on May 6, 2013. Wyoming opposed the conclusions in the Proposed Rule, primarily on the grounds that: (1) western states adequately manage and conserve the wolverine through existing regulatory schemes, (2) there is no evidence suggesting that the wolverine is incapable of adapting to changes in snowpack, to the extent those changes are even likely, and (3) "[a] listing attributed to climate change is particularly troubling because there is no immediacy, seemingly no connection, and few, if any, conservation measures would ameliorate climate change in a manner that could lead to delisting." (PI-002978.)

Finally, on May 7, 2013, Montana Fish, Wildlife & Parks ("FWP")

submitted lengthy comments on behalf of the State of Montana.[7] Summarizing the state's twenty-three-page submission, FWP Director Jeff Hagener stated the following:

> Based on our review of the status and distribution of wolverine, and the science used by the [Service] as justification for designation of a DPS and the proposed threatened status, [FWP] asserts that wolverine do not meet the criteria as a separate DPS, and are not warranted for federal listings under the ESA. . . . [W]olverines have been expanding for the past 50 years, concurrent with changing climate conditions comparable to what is predicted in the next 50 years. The science cited by the [Service] as the best available science is a hypothesis rather than a true representation of the *best available science* as required by the ESA. Interpretation and application of a broader review of the available science indicates that there is no imminent threat to wolverines in North America, and they do not meet the criteria for listing under the ESA.

(PI-002925 (emphasis in original).) Montana further stated that the Service's "claim that climate change poses an imminent threat to wolverine populations relies too heavily on a single hypothesis generated and pushed forward by a single research group that may be motivated to have wolverines listed," because "listing may provide new funding sources to continue their wolverine research efforts."

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7. Public affairs staff at the Service would later indicate that "[t]he State of Montana is opposed to listing and many of the arguments used in the [Proposed Rule's eventual] withdrawal originated" with the state's comments, that "Montana is highly concerned about the potential for listing and its [e]ffect to their wolverine trapping season," and that Montana "will support the withdrawal which will allow [its] trapping season to resume." (FR-02882.)

(PI-002936.)

At approximately the same time – within the first two weeks of May 2013 – the Service received solicited comments from seven peer reviewers. In its letter requesting peer review, the Service asked peer reviewers to answer the following five questions: (1) is the Service's description and analysis of the biology, habitat, population trends, and historic and current distribution of the wolverine accurate; (2) does the Proposed Rule provide accurate and adequate review and analysis of the factors affecting the species; (3) are there any significant oversights, omissions or inconsistencies in the Proposed Rule; (4) are the conclusions the Service reached logical and supported by the evidence it provided; and (5) did the Service include all the necessary and pertinent literature to support its assumptions, arguments, and conclusions. (PI-002624.)

Five of the seven peer reviewers[8] supported the Service's work on the Proposed Rule, generally answering "yes" to the first two questions above, "no" to

8. Peer reviewers included: Dr. William Zielinski, a Research Ecologist at the U.S. Forest Service's Pacific Southwest Research Station in Arcata, California; Dr. Keith Aubrey, a Research Wildlife Biologist at the Forest Service's Pacific Northwest Research Station in Olympia, Washington; Jeff Copeland, a Wildlife Biologist retired from the Forest Service's Rocky Mountain Research Station in Missoula, Montana and co-founder of the Wolverine Foundation; Dr. Michael Schwartz, a Research Ecologist and Conservation Genetics Team Leader with the Forest Service's Rocky Mountain Research Station in Missoula, Montana; and Dr. John Squires, Research Wildlife Biologist with the Forest Service's Rocky Mountain Research Station in Missoula, Montana.

the third question, and "yes" to the final two questions. (*See* PI-000484, 000544, 001244, 001278, 001292.) Two of the peer reviewers – Dr. Audrey Magoun ("Magoun"), a Wildlife Biologist and consultant with Wildlife Research & Management, and Dr. Robert Inman ("Inman"), a Biologist and Director of the Greater Yellowstone Wolverine Program at the Hornocker Institute/Wildlife Conservation Society – took issue with the Service's reliance on Copeland (2010) and McKelvey (2011), echoing a comment expressed by several states. Magoun and Inman disagreed with the Copeland (2010) authors'[9] decision to map wolverine denning habitat based on areas which maintained snow cover through May 15th, arguing that data do not suggest wolverines require snow that late into the spring for denning purposes. (PI-000747-750, 000968.) Based on their disagreement with Copeland (2010), Magoun and Inman questioned the validity of McKelvey (2011), as the latter was allegedly "based on a flawed assumption regarding the significance of snow through 15 May for wolverines, and . . . [therefore] vastly over-predicts habitat loss as it relates to the obligate denning hypothesis that the analysis is founded upon." (PI-000751.)

The comments received by the Service – particularly those criticizing the

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9. Both Magoun and Inman were co-authors on Copeland (2010), but Magoun had since questioned the study. (*See* PI-001362-86.)

Proposed Rule – sparked debate within the agency. During their May 16, 2013 monthly update, Service staff involved in the wolverine listing discussed the volume and nature of the comments received, including Magoun's and Inman's "[d]irect challenges to the climate change models used in the [P]roposed [R]ule." (FR-05986.) On May 24, 2013, Region 6 Chief of Endangered Species Bridget Fahey ("Fahey") informed Region 6 Assistant Regional Director of Ecological Services Michael Thabault ("Thabault") that Gary Frazer, Assistant Director for Endangered Species at the Service's Washington, D.C. office and one level down from Service Director Dan Ashe, "want[ed] to circle back on whether [listing] was really warranted," because "[i]f the modeling is such that [the Service] can't really predict [the location of critical habitat] in the future then maybe it's not good enough to say the [species] warrants listing." (FR-05971.)

In their June 2013 monthly update, Service staff discussed a proposal by the State of Montana, in consultation with other "affected" western states, regarding whether "the Service would consider a conservation strategy for [w]olverines to avoid listing." (FR-05911.) The states' proposed conservation strategy would "address the two principle threats – [c]limate [c]hange and trapping," and would focus on reintroduction of wolverines with the hope of "establish[ing] at least three additional sustaining populations in areas that will support them," again to

avoid listing. (*Id.*) Staff agreed to "let the State [of Montana] know that [the Service] would consider a conservation strategy in the listing rule, if it can be finished in time." (*Id.*) However, at this time, listing the wolverine as threatened appeared to be the likely outcome.

The following month, in advance of the Western Association of Fish & Wildlife Agencies ("WAFWA") summer meeting, staff from the Service's Region 1 office prepared for a discussion of the Proposed Rule and wolverine listing with an official from the Idaho Department of Fish & Game. That official expressed concerns over the Service's "use of models and projections in ESA determinations," as well as "the broader issue of [the] ESA and climate change," and whether the Service "will eventually list everything due to changes in climate." (FR-05897.)

At the WAFWA meeting, Region 6 Director Noreen Walsh ("Walsh") met with an official from Montana FWP to discuss the conservation strategy; the Montana official later summarized the meeting in an email as follows:

> I wanted to follow up on our discussion at WAFWA about a rangewide conservation agreement developed by the state fish and wildlife agencies for wolverine. Before committing a lot of resources towards development of a rangewide conservation agreement, we wanted to be sure of the expectations from the [the Service] in light of what the states can deliver. My understanding from that

> discussion is that the [Service] expects any such agreement to include a commitment for "facilitated range expansion" in addition to range-wide adaptive management monitoring. States are willing to pursue development of a rangewide monitoring process, and have committed to an interstate meeting in Salt Lake to work on that. Since our conversation [at WAFWA], I visited with colleagues from Cal. Dept. of Fish and Wildlife, Oregon Dept. of Fish and Wildlife, and Colorado Parks and Wildlife about potential for translocation. Colorado continues to say no for the reasons we discussed. Oregon similarly wasn't willing to make such a commitment because of uncertainty about potential habitat in light of possible climate change and potential regulatory concerns if wolverines are subsequently listed. California had the same concerns about putting a lot of effort into translocation of wolverines into habitat that may not be suitable in the future, as well as concerns about cost and who would pay. They did say they would be willing to include a commitment to evaluate the possibility of translocation, but can't commit to more beyond that.
>
> So with that said, and based on the discussion at WAFWA, I want to confirm that in the eyes of the FWS, that would be inadequate to meet the FWS purposes. If that is the case, please confirm so we can decide whether to continue with rangewide efforts.

(FR-05890.) During the August 2013 monthly update, Service staff reported that a "[s]tate lead conservation strategy is no longer being considered due to [a] lack of commitment from [Colorado] and [California]." (FR-05887.)

By February 2014, having completed a second round of public comment,

the Service decided to convene a science panel to "[g]ain a better understanding of the level of agreement among scientists regarding" the science behind the Proposed Rule, as well as any "sources of uncertainty." (FR-05866.) The Service did "[n]ot expect[] consensus, but hop[ed] to improve confidence in [its] decision." (*Id.*) Nonetheless, "[w]ithdrawal of the proposed listing remain[ed] a potential outcome" following the science panel. (*Id.*)

The Service held the two-day Wolverine Science Panel Workshop (the "Panel") in Spokane, Washington beginning on April 3, 2014. The Panel consisted of nine "experts in climate change, wolverines and other mammalian carnivores, habitat modelers, and population ecologists." (FR-14014.) The Service facilitated the event "through a structured agenda with exercises and discussions to investigate whether and how climate change might affect wolverines in the [United States]." (*Id.*) The event consisted of three topical areas: (1) defining climate-related wolverine habitat, (2) trends in snow and wolverine habitat, and (3) wolverine population trends. (FR-14028.) After presentations on each of the topics, Panel members were asked a series of multiple choice questions, and then asked to assign 100 points between the answer choices. The format allowed Panel members to tailor their answers as expressions of confidence – a Panel member's assignment of 100 points to an answer choice

signaling complete agreement, while a spread of points between choices signaling uncertainty.

Panel members were first asked about the correlation between persistent deep snow and three scales of wolverine habitat. Panel members allocated a very strong majority of the available points toward the "obligate" answer choice when asked about the correlation between persistent deep snow and the denning scale. (FR-14020-21.) Uncertainty increased when asked about the correlation at the home-range and range-wide scales, but based on the point allocations, the Panel was in near full agreement that the wolverine displays an obligate relationship to deep persistent snow at the denning scale.

Panel members were next asked "to register a score to indicate whether their current information would lead them to believe that the snow cover projections in McKelvey [] (2011) might be about right or lean toward over- or under-estimates." (FR-14022.) "The results indicated a peak in [Panel members'] belief that McKelvey [] (2011) was 'about right' in the short term," i.e. through the year 2045. (FR-14023.) However, "[t]he peak was less pronounced in the long term," i.e. the year 2085, "as support shifted toward the overestimate category," meaning Panel members believed that the McKelvey (2011) study actually "underestimated the severity of snow loss" in the long term. (*Id.*)

Panel members were than asked to "assess[] how well the McKelvey [] (2011) spring snow cover projections represent wolverine habitat by registering scores to indicate whether the . . . projections were likely to be just right or an over- or under-estimate of wolverine habitat." (FR-14023.) Panel members' point allocations showed stronger support for the McKelvey (2011) projections being "just right" than either an over- or under-estimate, and furthermore showed "no indication" that the study suffered from "systematic error resulting in a one-sided bias." (*Id.*)

Finally, Panel members were asked to comment on wolverine population trends, in terms of "optimism or pessimism about wolverine persistence in the [United States]." (FR-14024.) Panel members "expressed cautious optimism for wolverines in the short term, and qualified their optimism with uncertainty about whether wolverines are still expanding into their former range, and whether wolverines had any plasticity to adjust to changing habitats." (*Id.*) Notably, "[a]lthough [the Service] did not ask for consensus, nine out of nine [Panel members] expressed pessimism for the long-term (roughly end-of-century) future of wolverines in the contiguous [United States] because of the effects of climate change on habitat." (*Id.*)

Two weeks after the Panel, Service regional directors and "decision makers"

scheduled a briefing session, and Service staff working on the wolverine listing awaited "an indication of [the] direction to go with the final rule." (FR-05823.) Following the briefing session, top officials from Service Regions 1, 6, and 8 requested formal answers from Service staff regarding: (1) how the concept of "foreseeable future" had been handled with the wolverine; (2) the temporal connection between predicted reductions in snowpack and the wolverine's biological response to those reductions; and (3) the use of modeling in past listing decisions. (FR-05820.) Furthermore, on April 28, 2014, Walsh requested that Thabault "prepare a synopsis of the basis for [the Ecological Services division's] recommendation of threatened status for the . . . wolverine." (FR-05605.)

On May 14, 2014, Thabault emailed Walsh and Assistant Region 6 Director Matt Hogan a memo responsive to Walsh's request. In the memo, Thabault reviewed the Service's DPS analysis, its five-factor ESA analysis, *see* 16 U.S.C. § 1533(a)(1), the results of the 2013 peer review, and the results from the Panel one month earlier. Ultimately, based on his summary and review, Thabault concluded that relying on the findings in Copeland (2010) and McKelvey (2011) "as the best available scientific information regarding the effects of climate change on wolverine habitat remains scientifically justified," and that finalizing a listing determination for the wolverine was appropriate. (FR-05614.) Thabault also

stated the following with regard to the notion of uncertainty:

> In our review we have been unable to obtain or evaluate any other peer reviewed literature or other bodies of evidence that would lead us to a different conclusion. While we recognize there is uncertainty associated with when population effects may manifest themselves, any conclusion that there will not be population effects appears to be based on opinion and speculation. In our opinion that would not represent the best available scientific or commercial data available.

(*Id.*) In the two days following Thabault's memo, Walsh also received comment memos from Region 8 Director Ren Lohoefener ("Lohoefener") and Acting Region 1 Director Richard Hannan ("Hannan"). Both expressed reservations over listing the wolverine based upon the predicted effects of climate change. Lohoefener, citing the apparent wide range in results among various precipitation-based climate models and uncertainty with respect to wolverine population statistics, concluded that the wolverine is not "in danger of extinction in the next 20 to 50 years because of climate change effects on snowpack and loss of denning habitat." (FR-05581.) He opined that "[t]he situation [the Service] face[s] with the wolverine – whether a species is likely to become endangered in the foreseeable future because of climate change effects – will become a common source of petitioned actions and threaten the Service's resources to address priority issues." (*Id.*) Hannan's comments tracked Lohoenefer's – after noting that "there

remain critical information gaps that limit [the Service's] ability to draw conclusions on the impacts of climate change to wolverines and their habitat," he concluded that the Service lacks "clear understanding of the essential life history requirements of wolverines, the nature of the relationship between various climate variables and those life history requirements, and the expression of climate change and its projected effects on wolverine populations and viability." (FR-05567.)

By May 21, 2014, one week after receiving Thabault's memo and several days after receiving comments from Regions 1 and 8, Walsh had drafted a lengthy response to Thabault.[10] In it she questioned McKelvey (2011) for the following reasons: (1) "[t]he potential that climate model predictions that far into the future may be uncertain;" (2) "[P]anel biologists generally expressed a strong opinion that the relationship between wolverines and deep snow was an obligate relationship at the den site, they expressed much less certainty or unanimity that the relationship was obligate at larger spatial scales;" and (3) "[t]he potential that available habitat has been underestimated [by] only [including] those areas that retain snow until May 15[,] and therefore future loss overestimated." (FR-05542.) Walsh also concluded that, even if McKelvey (2011) correctly predicts the future

10. Plaintiffs suggest that Walsh had produced a draft response to Thabault's memo before actually receiving it. The timing of these exchanges is not particularly clear in the record.

snowpack loss, it is uncertain whether that loss will translate to decreased denning opportunities and, ultimately, decreased wolverine numbers. Interestingly, Walsh concluded the May 21st draft by stating that despite "the priority [she] place[s] on communication and coordination with state wildlife agencies," and the fact that "state agencies are [the Service's] primary partners in conservation, the determination [she came] to . . . about the wolverine's status under the [ESA] [was hers] alone, and [had] not been influenced in any way by a state representative." (FR-05543.)

On May 22, 2014, Walsh received a short memo and attached report from Stephen Torbit, Assistant Region 6 Director, Science Applications ("Torbit"). Walsh had previously posed the following two questions to the Science Applications division, which Torbit answered in the memo: (1) "[w]hat is [the division's] perspective of the temperature vs. precipitation projections for wolverine habitat, especially with regard to the model projections of the reduced deep spring snow apparently needed for successful wolverine denning;" and (2) "[w]hat is [the division's] perspective of the rigor of the correlative relationship between persistent spring snow cover and wolverine denning observations." (FR-05452.) As to the first question, Torbit stated that "the modelling [sic] efforts that support the listing recommendation are not at a sufficiently reduced scale to

clearly articulate the impact to existing or potential wolverine habitat, based on persistent snow-cover." (FR-05453.) On this point, he attached a report to the memo prepared by the University of Colorado-Boulder for the Colorado Water Conservation Board (the "Colorado study"), in which the authors present modeling results showing that high elevation snowpack in Colorado is expected to remain at 70-90% of historic norms through the end of the twenty-first century. (FR-5457 et seq.) As to the second question, he stated that because the wolverine's need for deep snow in the denning context is not completely understood, the lack of deep snow/lack of den sites/lack of recruitment/decreased population correlative chain is logically weak. (FR-05454.) Torbit concluded that strengthening this chain would strengthen the listing rationale, and thus he called for further study of the mechanisms behind the wolverine's need for deep, persistent snowpack. (FR-05455.)

On May 30, 2014, Walsh produced a final version of her May 21st memo, incorporating Torbit's comments, the results presented in the Colorado study mentioned above, comments from Regions 1 and 8, and many of the arguments contained in comment memos received from the western states. In it, she concluded that the Service should not list the wolverine as threatened, for three reasons. First, Walsh cited information that "populations are continuing to expand

both within the area currently inhabited by wolverines as well as suitable habitat not currently occupied and/or occupied with a few individuals." (FR-05371.) In support of this conclusion, Walsh pointed to the discovery of loan male wolverines in Colorado and California, "dispersers" in Wyoming, and a 2013 estimated available habitat capacity in the United States of 644 wolverines. (*Id.*) Second, Walsh stated that though there "is strong support for the existence of an obligate relationship between wolverines and deep spring snow at the den site[,] support for the obligate relationship . . . at an individual wolverine's home range or the species range in general is lacking." (*Id.*) On this point, Walsh opined that the Service "can only reliably predict a . . . decline in wolverine habitat [commensurate with a decline in snowpack] if we believe that wolverine have an obligate relationship with snow for all life stages." (FR-05369.) Third, Walsh asserted that, while she generally agreed with the notion that climate change would likely affect the wolverine at some point in the future, as of May 2014 the Service did "not have the sufficient resolution of predictive climate models nor certainty in those models to make definitive conclusions about both the amount and persistence of snowfall at the scale of specific wolverine den sites." (FR-05372.) She acknowledged that McKelvey (2011) was "the most sophisticated analysis of the impacts of climate change at a scale specific to wolverine," but

ultimately concluded that "the scale is *not fine enough* to deal with the site specific characteristics of wolverine dens." (*Id.* (emphasis added).) As she did in the May 21st draft, Walsh emphasized that the conclusions she outlined in the final memo were hers alone and had "not been influenced in any way by a state representative." (FR-05373.) She ended the memo by directing Service staff to prepare a withdrawal of the Proposed Rule.

With an August 2014 decision deadline looming, Service staff began working on a withdrawal, but appeared to struggle with the 180 degree change of course. On June 6, 2014, Shawn Sartorious ("Sartorious") with the Service's Montana Ecological Service Office – who appears to have been more intimately involved in the listing effort than anyone else at the agency – commented on Walsh's memo and directions. As to the Colorado study which Torbit provided to Walsh, Sartorious indicated that he had not reviewed it with Service staff, and that regardless of the study's conclusions with respect to snowpack depth, the likelihood of a shorter snow season due to warming temperatures was more alarming in terms of effects on the wolverine. (FR-05031.) As to the notion that the Service must know the mechanisms behind the wolverine's need for deep snow before listing, Sartorious, with a hint of sarcasm, stated that apparently "[t]he fact that essentially all wolverine scientists agree that snow is essential, but posit

different mechanisms for the relationship, casts doubt on the snow relationship." (*Id.*) He further noted that "[i]t is unlikely that we will ever have conclusive evidence for a mechanism in this case due to the difficulties of experimentally manipulating wolverine populations." (*Id.*)

By July 2014, Service staff began circulating a draft withdrawal of the Proposed Rule, yet some level of discord remained in resolving the justifications for withdrawing the Proposed Rule with the contents of the Proposed Rule itself. On July 7, 2014, a Service biologist commented that, because much of the language in the draft withdrawal appeared to have been transferred from the Proposed Rule, the draft contained "no hint" that the Service ultimately questioned the climate models it had relied on in the Proposed Rule. (FR-03282.) She suggested "insert[ing] new information upfront about the uncertainties [the Service] now [has] and questions that have been raised" because, "as written, [the Service] then appear[s] to do an about-face when [in] the threats analysis later" in the document. (*Id.*) On July 10th, Fahey, Region 6 Chief of Endangered Species, commented on two shortcomings she recognized in the draft withdrawal. First, she stated that staff "need[ed] to do more to connect the dots that [the Service has] no information on species response to changes in habitat by loss of snow at the larger scales, rather than simply saying [wolverines] might still have enough den

sites," because the den-scale effect has more to do with den success than the availability of enough deep snow for denning. (FR-02000.) Second, Fahey urged staff to strengthen the criticism of Copeland (2010) and McKelvey (2011) – rather than attacking the May 15th snow persistence date in Copeland (2010) on the grounds that "many wolverine are done denning by then," Service staff should "focus[] on the fact that neither Copeland nor McKelvey predicted species response, they both predicted what was happening to snow." (*Id.*)

As the Court stated at oral argument, the task before the Service in justifying the withdrawal of the Proposed Rule must have been discouraging, if not demoralizing. The above-cited references to the record during this time period demonstrate how difficult this task really was.

IV. Listing history leading up to these consolidated cases: August 2014 - present

On August 13, 2014, eighteen months after initiating the process to list the wolverine as a threatened species, the Service withdrew the Proposed Rule, concluding "that the factors affecting the DPS as identified in the proposed rule are not as significant as believed at the time of the proposed rule's publication." (FR-00002 (citing 79 Fed. Reg. 47,522)) [the "Withdrawal"]. In the Withdrawal, the Service "determined that based on new information and further analysis of the

existing and new data, factors affecting the DPS cited in the proposed listing rule do not place the wolverine in danger of extinction now or likely to become so in the foreseeable future." (*Id.*) Characterizing the nature of the process leading up to the Withdrawal, the Service noted "scientific disagreement and debate about the interpretation of the habitat requirements for wolverines and the available climate change information used to determine the extent of threats" to the wolverine (*Id.*), as well as "substantial disagreement regarding the sufficiency or accuracy of the available data" underlying the Proposed Rule. (FR-00003.)

Apart from addressing comments received following the Proposed Rule, the Withdrawal focused most pointedly on the Service's previous determinations surrounding climate change and its effects on the wolverine. Summarizing the impacts of climate change as re-evaluated from the time of the Proposed Rule, the Withdrawal included the following:

> There is significant evidence that the climate within the larger range of the wolverine is warming, affecting snow patterns and associated wolverine habitat. The biological response of wolverine populations to such changes, however, cannot reasonably be deduced with an acceptable degree of certainty. At this time, [the Service] do[es] not know how the effects of climate change will impact wolverine populations for the following reasons:
>
> (1) Wolverines are believed to be expanding both within

the area currently inhabited by wolverines as well as into suitable habitat not currently occupied and/or occupied with a few individuals. Recent evidence suggests that there is suitable habitat available within the contiguous United States to support a wolverine population twice as large as that at present. Even under conditions of future reduced snowpack as a consequence of climate change, sufficient habitat will likely remain to maintain the wolverine population at the current level of abundance.

(2) There is strong support for the existence of an obligate relationship between wolverines and deep spring snow at the den site; however, available information suggests that den sites are not currently limiting wolverines, and [the Service] do[es] not have sufficient information to predict if and when any limitation will occur in the future. Additionally, support for the obligate relationship between wolverine and deep snow at an individual wolverine's home range or the DPS' range in general is lacking. That is, [the Service] do[es] not have sufficient information to suggest that deep snow is required by wolverines throughout their home ranges, beyond the level of the individual den site.

(3) [The Service] do[es] not have sufficient information to understand the specific response of wolverines to future effects of changes in climate. Although [the Service] do[es] not question that climate change is likely to alter the habitats utilized by wolverines to some degree, [the agency] ha[s] no data . . . as to the likely biological response of wolverine populations to those habitat changes, and, most germane for the purposes of the [ESA], no data to reliably suggest that the anticipated changes are such that the viability of wolverine populations in the contiguous United States will be at risk.

> Therefore, based on [the Service's] analysis of the best available scientific information, [the Service] do[es] not find the effects of climate change to likely place the wolverine DPS in danger of extinction in the foreseeable future and therefore meeting the definition of a threatened species under the [ESA].

(FR-00016.) Furthermore, the Withdrawal included the following analysis of the threat to the wolverine posed by a loss of genetic diversity:

> Small population size and resulting inbreeding depression are potential, though as-yet undocumented, threats to wolverines in the contiguous United States. There is good evidence that genetic diversity is lower in wolverines in the DPS than it is in the more contiguous habitat in Canada and Alaska. The significance of this lower genetic diversity to wolverine conservation is unknown. [The Service] do[es] not discount the possibility that loss of genetic diversity could be negatively affecting wolverines now and could continue to do so in the future. It is important to point out, however, that wolverine populations in the DPS area are thought to be the result of colonization events that have occurred since the 1930s. Such recent colonizations by relatively few individuals and subsequent population growth are likely to have resulted in founder effects, which could contribute to low genetic diversity. The effect of small population sizes and low genetic diversity may become more significant if populations become smaller and more isolated.
>
> Based on the best scientific and commercial information available [the Service] conclude[s] that demographic stochasticity and loss of genetic diversity due to small effective population sizes is not a threat to the wolverine DPS. In the proposed listing rule, [the Service]

> concluded that demographic stochasticity and loss of genetic diversity due to small effective population sizes were threats to wolverines only when considered cumulatively with habitat loss due to climate change. Since [the Service] no longer find[s] that habitat loss due to climate change is a threat to the wolverine DPS, [the agency] also no longer find that demographic stochasticity and loss of genetic diversity due to small effective population sizes are threats when considered cumulatively with habitat loss due to climate change.

(FR-00023.)

Plaintiffs, consisting of some twenty-four conservation and wildlife advocacy groups, filed these three cases on October 13, 2014, two months after the Service published the Withdrawal. The Court consolidated the cases under the caption *Defenders of Wildlife v. Jewell et al.*, CV 14-246-M-DLC, on December 18, 2014. The plaintiffs in CV-14-246-M-DLC and CV-14-247-M-DLC agreed to brief the case together, while the plaintiffs in CV-14-250-M-DLC requested the right to file a separate brief in order to present an argument specific to the Service's broader treatment of the "significant portion of its range" provision in the ESA's "endangered" and "threatened" definitions, which the Court allowed. On March 10, 2015, the Court granted intervenor-of-right status to the following parties, organized by the perspective each generally represents: (1) the State Government Intervenors, consisting of the States of Montana, Idaho, and

Wyoming; (2) the Non-Governmental Intervenors, consisting of the Idaho Farm Bureau Federation, Wyoming Farm Bureau, Montana Farm Bureau Federation, Washington Farm Bureau, Idaho State Snowmobile Association, Colorado Snowmobile Association, and Colorado Off-Highway Vehicle Coalition; and (3) the Energy Industry Intervenors, consisting of the American Petroleum Institute, Montana Petroleum Association, and Western Energy Alliance.

The parties and intervenors exhaustively briefed this case over the course of nearly six months, with the final reply brief filed on November 20, 2015. The Court then set a hearing and, as mentioned above, heard several informative hours of oral argument from all sides on February 9, 2016. The Court took the matter under advisement on that date.

LEGAL STANDARDS

I. Summary Judgment

A party is entitled to summary judgment if it can demonstrate that 'there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). Summary judgment is warranted where the documentary evidence produced by the parties permits only one conclusion. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251 (1986). Only disputes over facts that might affect the outcome of the lawsuit will preclude entry of summary

judgment; factual disputes that are irrelevant or unnecessary to the outcome are not considered. *Id.* at 248. "[S]ummary judgment is an appropriate mechanism for deciding the legal question of whether [an] agency could reasonably have found the facts as it did" based upon the "evidence in the administrative record." *City & Cnty. of San Francisco v. United States*, 130 F.3d 873, 877 (9th Cir. 1997) (citations omitted).

II. Administrative Procedure Act

Courts review claims regarding the ESA under the Administrative Procedure Act ("APA"), 5 U.S.C. §§ 701 et seq. *See Native Ecosystems Council v. Dombeck*, 304 F 3d 886, 891 (9th Cir. 2002). Under the APA, a "reviewing court shall hold unlawful and set aside agency action . . . found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). The Court's scope of review is narrow, and the Court should "not substitute its judgment for that of the agency." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). 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.

Gardner v. U.S. Bureau of Land Mgmt., 638 F3d 1217, 1224 (9th Cir. 2011). An agency's actions are valid if it "considered the relevant factors and articulated a rational connection between the facts found and the choices made." *Id.* (internal quotation marks omitted). If the record supports the agency's decision, that decision should be upheld even if the record could support alternative findings. *Arkansas v. Oklahoma*, 503 U.S. 91, 112-113 (1992). Review of the agency's action is "highly deferential, presuming the agency action to be valid." *Buckingham v. Sec'y of U.S. Dep't of Agric.*, 603 F.3d 1073, 1080 (9th Cir. 2010).

However, this presumption does not require courts to "rubber stamp" administrative decisions "they deem inconsistent with a statutory mandate or that frustrate the congressional policy underlying a statute." *Bureau of Alcohol, Tobacco & Firearms v. Fed. Labor Relations Auth.*, 464 U.S. 89, 97 (1983) (internal quotation marks omitted). Judicial review under the APA is "narrow but searching and careful," and courts need not uphold agency actions where "there has been a clear error of judgment." *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1065 (9th Cir. 2004) (citations and internal quotation marks omitted).

ANALYSIS

I. The ESA

The ESA was enacted to "provide a program for the conservation of . . . endangered species and threatened species" and to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. § 1531(b). To receive the full protections of the ESA, a species must first be listed by the Service as "endangered" or "threatened." *Id.* § 1533.

Under the ESA, an "endangered" species "means any species which is in danger of extinction throughout all or a significant portion of its range." *Id.* § 1532(6). A "threatened" species "means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." *Id.* § 1532(20).

The ESA requires the Service to "determine whether any species is an endangered species or a threatened species because of any of the following factors: (A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its

continued existence." *Id.* § 1533(a)(1). The Service must make these determinations "solely on the basis of the best scientific and commercial data available . . . after conducting a review of the status of the species." *Id.* § 1533(b)(1)(A).

Upon listing a species under the ESA, the Service must, "to the maximum extent prudent and determinable," designate critical habitat for such species. 16 U.S.C. § 1533(a)(3). Under the ESA, "critical habitat" means "the specific areas within the geographical area occupied by the species, at the time it is listed . . . , on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and . . . specific areas outside the geographical area occupied by the species at the time it is listed . . . , upon a determination by the [Service] that such areas are essential for the conservation of the species." *Id.* § 1532(5)(A).

Once a species is listed as "endangered" or "threatened" under the ESA, it is protected under the ESA's substantive and procedural provisions. The ESA prohibits any federal agency from taking any action found "likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical habitat]." *Id.* § 1536(a)(2).

The ESA also makes it unlawful for any person to "take," meaning to injure or kill, a member of a listed species. *Id.* § 1538(a)(1)(B).

Under the ESA, a "species" that may receive the protections of the Act includes "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." *Id.* § 1532(16). Congress did not define "distinct population segment" in the ESA, and the term has no generally accepted scientific meaning. *See Nat'l Ass'n of Home Builders v. Norton*, 340 F.3d 835, 842 & n.8 (9th Cir. 2003). In 1996, the Service issued a policy interpreting the phrase "distinct population segment" that requires the consideration of the discreteness of the population segment in relation to the remainder of the species to which it belongs; the significance of the population segment to the species to which it belongs; and the population segment's conservation status in relation to the Act's standards for listing. 61 Fed. Reg. 4,722, 4,725 (Feb, 7, 1996).

The ESA and its implementing regulations similarly fail to define what constitutes a "significant portion of [a species'] range" for the purpose of the listing determination. 16 U.S.C. § 1532(6). In July 2014, the Service published a policy interpreting the phrase. *See* SPR000075 (citing 78 Fed. Reg. 37,578 et seq.) [hereinafter the "SPR Policy"]. Because the SPR Policy is directly at issue

here, the Court will discuss it in greater detail below.

"The [ESA] is concerned with protecting the future of [a listed] species, not merely the preservation of existing [members of the species]." *Alaska Oil & Gas Ass'n v. Jewell*, __ F.3d __, 2016 WL 766855 at *7 (9th Cir. Feb. 29, 2016). To that end, "it requires use of the best available technology, not perfection." *Id.* (citing *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 602 (9th Cir. 2014); *Bldg. Indus. Ass'n of Super. Cal. v. Norton*, 247 F.3d 1241, 1246-1247 (D.C. Cir. 2001) ("the Service must utilize the 'best scientific data available,' not the best scientific data possible") (citations and alterations omitted)). The Service "may not base its listings on speculation or surmise," but "where there is no superior data, occasional imperfections do not violate the ESA." *Id.* (citing *Bldg. Indus. Ass'n of Super. Cal.*, 247 F.3d at 1247) (citations and alterations omitted). "The best available data requirement . . . prohibits [the Service] from disregarding available scientific evidence that is in some way better than the evidence it relies on." *Kern Cnty. Farm Bureau v. Allen*, 450 F.3d 1072, 1080 (9th Cir. 2006) (citations and alterations omitted).

II. Plaintiffs' motions for summary judgment

The Court includes the voluminous facts as outlined in the sections above not necessarily because they inform the undersigned's analysis under the APA and

ESA, but because the natural reflex in a situation such as this is to ask "why?" Why did the Service make the decision it did in the Proposed Rule, based on what it determined to be the best available science, and reject that decision eighteen months later?

Based on the record, the Court suspects that a possible answer to this question can be found in the immense political pressure that was brought to bear on this issue, particularly by a handful of western states. The listing decision in this case involves climate science, and climate science evokes strong reactions. Nevertheless, the Court believes Director Walsh was sincere in her statement that the decision was not made "lightly nor without significant thought and study and discussion." (FR-02281.) The Service's decision on the wolverine has profound consequences, and the reality is that, in some instances, species conservation is a political issue as much as it is a scientific one.

Regardless, the Service's reversal does not, in itself, render the final product at issue here unlawful. Indeed, the ESA does not preclude the Service from changing its mind. Instead, the question is whether the Withdrawal, freestanding, is arbitrary and capricious. Plaintiffs, much to their credit, have steadfastly maintained that the Service's behind-the-curtain reasons for departing from the Proposed Rule are less important than the end result. Thus, Plaintiffs rightly seek

to focus the Court's attention on the Withdrawal, not on the substantial change of course it represents.

Plaintiffs in the three cases advance the following five arguments in support of their motions for summary judgment: (1) the Service unlawfully ignored the best available science by dismissing the threat to the wolverine posed by climate change; (2) the Service unlawfully ignored the best available science by dismissing the threat to the wolverine posed by genetic isolation and small population size; (3) the Service unlawfully ignored the best available science by dismissing other threats to the wolverine, including, either independently or in concert with climate change, trapping and infrastructure development; (4) the Service failed to evaluate whether the inadequacy of existing regulatory mechanisms threatens the wolverine; and (5) the Service's "significant portion of its range" policy is invalid on its face and as applied to the wolverine.

The Court agrees with Plaintiffs as to the first and second of these arguments, will remand this matter back to the Service based upon them, and consequently will not take up the third and fourth arguments. The Court disagrees with Plaintiffs as to the fifth argument, and will grant Defendants' and Defendant-Intervenors' motions for summary judgment on the "significant portion of its range" issue.

A. The Service erred in its determination regarding the effects of climate change on the wolverine at the den scale

In the Withdrawal, the Service found that it could not determine with any certainty whether climate change would impact wolverine reproductive denning because: (1) the scale at which McKelvey (2011) predicts future snowpack decline is too coarse, and (2) it cannot be known how the wolverine will react to changes in snowpack depth and persistence if the precise reason why wolverines den in deep snow is unknown. As a result of this uncertainty, the Service decided to withdraw its proposal to list the wolverine as threatened. Plaintiffs contend that with these conclusions, the Service ignored the *best* available science by demanding *better* science. Defendants counter that it is within the discretion of the Service to weigh the import of scientific studies and data, and that in light of new information received after publishing the Proposed Rule, the Service conducted a reasoned analysis of McKelvey (2011) that led to a different conclusion. Furthermore, as to the causal connection between wolverine denning and spring snow cover, Defendants rely on the Copeland (2010) authors' assurance that, though they modeled wolverine distribution based on spring snow persisting through May 15th, the study does not contend that wolverines in fact *require* snow through May 15th for denning purposes. Plaintiffs argument on this

issue is compelling, and the Court will remand to the Service to reconsider its conclusions regarding the effects of climate change on wolverine denning habitat.

1. McKelvey (2011)

The Service stated the following with regard to McKelvey (2011) in the Withdrawal:

> While we still agree that McKelvey [] (2011) is the most sophisticated analysis of impacts of climate change at a scale specific to the range of the wolverine, . . . [P]anel members . . . , public comments, and recent scientific information . . . emphasize limitations inherent in downscaled climate models and the importance of understanding the effect of climate-data spatial resolution on wolverine viability in complex terrain. Downscaling techniques improve understanding of climate at smaller, regional scales compared to [GCMs], but their spatial resolution may still be inadequate to describe the variability of microclimates in which organisms live . . . .
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> * * *
>
> [A]n improved understanding of how microclimatic variation alters the habitat associations of wolverines at fine spatial scales will be useful in understanding climate impacts on wolverine habitat.
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> Additionally, great difficulty still exists in predicting changes in precipitation with climate models, especially compared to the more confident predictions for temperature . . . . Newer modeling techniques suggest that higher elevations could maintain more snow than previously thought and possibly even receive more snow than historical records show due to climate change . . . . While these contemporary techniques have not been

> applied to the northern portions of the proposed wolverine DPS . . . , and much of the high elevation wolverine range is currently unoccupied, they demonstrate that the science associated with climate models is continuing to change, highlighting the uncertainty of our conclusions in the proposed rule . . . .

(FR-00013.)

There are two fatal flaws in the Service's treatment of McKelvey (2011). First, the Service impermissibly cast the study aside based upon: (1) insufficient competing "science," in the form of Torbit's personal opinion, which itself relied on an inapposite precipitation study from Colorado; (2) comments received from western states, most notably Montana; (3) what the Service characterized as disunion between Panel members; and (4) Walsh's own analysis, according to Defendants.

The Court views Torbit's comments as nothing more than an unpublished, unreviewed, personal opinion, elicited by Walsh in the eleventh hour to back fill her foregone conclusion to withdraw the Proposed Rule. Torbit relied on the Colorado study to support his scale-related critique of McKelvey (2011), but, while the Colorado study does highlight the issue of scale in modeling precipitation in mountainous environments, it does not directly address the issue at hand in the geographic location most germane to the wolverine – persistence of

historical spring snow cover in the northern Rocky Mountains. Torbit relied on tangential science to discredit specific science, rendering his opinion an insufficient basis to ignore McKelvey (2011), and the Service's reliance on his opinion arbitrary and capricious. *See Kern Cnty. Farm Bureau,* 450 F.3d at 1080 (the ESA "prohibits [the Service] from disregarding available scientific evidence that is in some way better than the evidence it relies on"). Moreover, the timing of Torbit's comments gives them a sort of "shoot first ask questions later" feel – Walsh had drafted a memo outlining her reasons for withdrawing the Proposed Rule *before* receiving Torbit's opinion and the Colorado study, leaving the impression that Torbit's comments simply served to justify a decision already made. This strikes the Court as the essence of arbitrary and capricious decision making.

None of the Service's other reasons for casting McKelvey (2011) aside in the Withdrawal hold water either. Of the numerous western states which urged the Service not to list the wolverine and attacked the agency's reliance on McKelvey (2011), not one provided any scientific evidence directly rebuffing the study's conclusions. On the contrary, internal Service documents expose the likely motives – freedom from perceived federal oversight, maintaining the public's right to trap – behind the states' efforts against listing the wolverine. Montana's attacks

against McKelvey (2011) and its authors, all scientists at the Service's Rocky Mountain Research Station, are particularly weak and unsavory. Not only did Montana cavalierly dismiss the study as a "hypothesis," breezing right by its well-supported conclusions, but FWP accused the Service biologists of cooking the science in favor of listing with the intent of receiving additional funding. As with Torbit's comments, the states' comments are insufficient to supplant McKelvey (2011) and the Service's reliance on them was arbitrary and capricious.

Likewise, the Service arbitrarily and capriciously interpreted the results of the Panel as casting an unacceptable amount of doubt on McKelvey (2011). Panel members generally concluded that McKelvey (2011) correctly projected decreased snow cover through 2045, likely *underestimated* snow cover losses through 2085, and correctly captured, without systematic error, wolverine habitat through snow cover projections. To then characterize these results as calling McKelvey (2011) into question constitutes an "explanation that runs counter to the evidence before the [Service]," and as such is arbitrary and capricious. *Gardner*, 638 F3d at 1224. Once again, the optics do not look good on this point – the Service convened the Panel when, despite five out of seven peer reviewers supporting the rationale in the Proposed Rule, the Service mischaracterized this support as "substantial disagreement" among scientists familiar with the wolverine. The Service similarly

mischaracterized the Panel conclusions.

Finally, Defendants cite Walsh's own "detailed analysis of whether McKelvey (2011) could be relied on to make a reliable determination of the possible effects of climate change on wolverine habitat." (Doc. 73 at 25.) While the Court in no way diminishes Walsh's dedication and credentials, her analysis of the reliability of McKelvey (2011) is only so good as the information she based it upon. In light of the foregoing regarding Torbit's opinions, the states' comments, and the Service's interpretation of the Panel results, that Walsh relied on these inputs necessarily renders the output suspect.

The Service committed a second fatal error with regard to McKelvey (2011) by discrediting the study on the basis that it failed to analyze projected precipitation trends at a finer scale, when the Service recognized in the Withdrawal that neither finer scale precipitation modeling, nor purported "contemporary techniques," had been utilized in *any* study with regard to the wolverine. Quite simply, the Service cannot demand a greater level of scientific certainty than has been achieved in the field to date – the "'best scientific data available' . . . standard does not require that the [Service] act only when it can justify its decision with absolute confidence," and "the ESA accepts agency decisions in the face of uncertainty." *Ariz. Cattle Growers' Ass'n v. Salazar*, 606

F.3d 1160, 1164 (9th Cir. 2010) (citations omitted). "[W]hile the [Service] may not base its listings on speculation or surmise where there is no superior data, occasional imperfections do not violate the ESA." *Alaska Oil & Gas Ass'n*, __ F.3d __, 2016 WL 766855 at *7.

For these reasons, the Court finds the Service's discrediting of McKelvey (2011) in the Withdrawal to be arbitrary and capricious.

2. Causal relationship between snow and denning

The Service also sought certainty beyond what is required by the ESA and case law interpreting it when it demanded the precise mechanism behind the wolverine's established need for snow for reproductive denning purposes. The Service stated the following on this issue in the Withdrawal:

> The primary hypothesis put forward in the [Proposed Rule] is that a loss of areas with persistent spring snow cover will result in a loss of potential wolverine den sites, or failure of den sites, negatively impacting future abundance and trend. . . . The habitat described in the Copeland [(2010)] model includes areas that retained snow until May 15, in as few as 1 of 7 years. In other words, if an area retained snow in only 1 of 7 years, it was still included in the model describing habitat, and 97.9 percent of the sample of den sites fell within this area. That means that some proportion of those den sites fell within an area that did not retain snow each year. This brings into question the reliability of the conclusion that snow persisting until May 15 is a necessary condition for wolverine reproduction.

* * *

> [The Service] do[es] not appear to know at this point with any reliability what the causal relationship is between the feature of deep persistent spring snow and wolverine dens . . . ; that is, we do not understand why wolverines appear to require deep persistent spring snow for denning. Several hypotheses exist to explain the correlation between den sites and snow, such as den structure, food refrigeration, security from predators, or a thermal buffer for kits in the den, but these hypotheses have not been tested. All of these hypotheses seem possible and worth testing, but without such biological information demonstrating the causal mechanism, it is difficult to determine beyond speculation if, and how soon, the effects of climate change (e.g., earlier snowmelt) may influence or limit availability of den sites, habitat, and ultimately wolverine abundance, trend, and viability into the future.
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> * * *
>
> In summary, the pertinent question that remains is if and when a decrease in deep, persistent spring snow will limit the availability of den sites, therefore causing a population decline in the future. Available information does not yet allow us to predict if and when that may occur.

(FR-00014.) Two significant issues arise from these statements.

First, the Service erred in this analysis by repeating the unfounded criticism of Copeland (2010), seemingly in order to further criticize McKelvey (2011) and to cloud the otherwise crystal-clear conclusion that wolverines require snow for denning purposes. The criticism of Copeland (2010) – that the data does not support the conclusion that wolverines require snow cover through May 15 each

year – reflects a misunderstanding of the point of the study. Recognizing that wolverines and wolverine habitat are difficult to study directly, the Copeland (2010) authors sought to map wolverine distribution using den location as a proxy. The authors chose the date range they did based on wolverine life history, and, remarkably, mapping snow which persisted through this date range picked up nearly every known den site for which the authors had location information. The Copeland (2010) authors were seeking the tightest fit between their model and the observed data – if a date range one month earlier provided the tightest fit, then the authors would have based their distribution model on snow persisting through April 15th instead. In other words, while the authors chose the May 15th date at the outset of the study based on the approximate close of the weaning period, *in hindsight* the date was ideal because it turned out to be neither over- nor under-inclusive. Given the results, choosing an earlier date would certainly have picked up at least the same number of dens as the May 15th date, but would also have resulted in a much larger area included in the distribution model. This is because the closer the snow cover period end date is to the middle of winter in the northern hemisphere, the more snow is likely to be on the ground throughout the wolverine's circumboreal reach – even moderately snowy places, where wolverines never den, could be included in the model if the date were, say, March

15th. Ultimately, the Service's analysis of Copeland (2010), as the precursor to McKelvey (2011), is not merely the product of differing interpretations among Service staff; rather, it is an implausible misinterpretation that runs counter to the intent of the study. *See Gardner*, 638 F3d at 1224. As such, the Service's dismissive interpretation of Copeland (2010) was arbitrary and capricious, and cannot serve as the basis for discounting the wolverine's snow-related denning requirements.

Second, as Plaintiffs' counsel rightly pointed out at the February 9, 2016 motions hearing, the Service's stance here borders on the absurd – if evidence shows that wolverines need snow for denning purposes, and the best available science projects a loss of snow as a result of climate where and when wolverines den, then what sense does it make to deny that climate change is a threat to the wolverine simply because research has yet to prove exactly *why* wolverines need snow for denning? There is near universal agreement that wolverines require deep snow for reproductive denning purposes. The Service acknowledged the correlation in the Withdrawal. The Copeland (2010) authors compared their distribution model to records documenting 562 out of 562 known dens in the wolverine circumboreal reach occurring in snow. Panel members overwhelmingly identified the wolverine's relationship with snow as obligate at the den scale. A

majority of peer reviewers agreed. Numerous studies spanning nearly fifty years of wolverine research corroborate this conclusion. (*See* PI-001258; FR-05609.)

Nevertheless, the Service stated in the Withdrawal that because the mechanism is unconfirmed, the wolverine's reaction to climate change relative to denning cannot be postulated. Not only is the Service's demand for conclusiveness contrary to the law, *see Ariz. Cattle Growers' Ass'n*, 606 F.3d at 1164; *Alaska Oil & Gas Ass'n*, __ F.3d __, 2016 WL 766855 at *7, but it is a particularly high bar for the wolverine:

> [Unlike other climate-change-affected species, where the Service has documented impacts,] for wolverine [the Service] is unlikely to ever get this kind of "smoking gun" because they are seldom observed even when radio collared, and the effects of climate change are likely to be much more subtle, such as slightly decreased reproductive output, fewer prime home ranges that are productive enough to support a female with kits, or decreased connectivity resulting in fewer successful movements between major habitat areas. Thus, detecting a species[] response either now or in the future is unlikely due to the near impossibility of obtaining such information on this hard-to-study species.

(FR-05618.) If ever there was a species for which conservation depends on foregoing absolute certainty, it is the wolverine. For these reasons, the Court finds the Service's treatment of wolverine denning requirements in the Withdrawal to be arbitrary and capricious.

B. The Service erred by not considering small population size and lack of genetic diversity as a tandem independent threat to the wolverine

Plaintiffs contend that the Service's failure to recognize the threat to the wolverine posed by small population size and its likely genetic effects was arbitrary and capricious. They cite to the Withdrawal, where the Service catalogued a number of seemingly perilous circumstances related to this issue, yet concluded that none of those circumstances actually posed a threat. Defendants reiterate the conclusion the Service came to in the Withdrawal: "[t]o date, no adverse effects of the lower genetic diversity of the contiguous U.S. DPS of wolverines have been documented." (Doc. 73 at 39 (citing FR-00022).) Because the Court fails to see how the cited circumstances can reasonably lead to the Service's conclusion, the Court will grant the Plaintiffs' motion for summary judgment and remand to the Service to reconsider its conclusions regarding wolverine population size.

The Service made a number of observations in the Withdrawal regarding wolverine genetic health, diversity, and viability, including the following: (1) "[e]ffective population size," i.e. the number of reproducing individuals in a population, "is important because it determines rates of loss of genetic variation and the rate of inbreeding"; (2) "[p]opulations with small effective population

sizes show reductions in population growth rates and increases in extinction probabilities when genetic diversity is low enough to lead to inbreeding depression"; (3) studies "suggest[] that for short-term (a few generations) maintenance of genetic diversity, effective population size should not be less than 50"; (4) "[e]stimates for effective population size for wolverines in the northern Rocky Mountains average[] 35," which "is below what is thought to be necessary for short-term maintenance of genetic diversity"; (5) "[f]or long-term (hundreds of generations) maintenance of genetic diversity, effective population size should not be less than 500 individuals," or greater; (6) "[e]ach wolverine subpopulation within the contiguous United States would need an estimated 400 breeding pairs, or 1 to 2 effective migrants per generation to meet this threshold"; (7) "[t]he entire population [of wolverines in the contiguous United States] is likely only 250 to 300 . . ., with a substantial number of these being unsuccessful breeders or non-breeding subadults (i.e., part of the census population, but not part of the effective population)"; (8) "population connectivity exchange with the larger Canadian/Alaskan population would likely be required for long-term genetic health of the DPS," but "[t]he apparent loss of connectivity between wolverines in the northern Rocky Mountains and Canada prevents the influx of genetic material needed to maintain or increase the genetic diversity in the contiguous United

States; and (9) "[g]enetic drift has already occurred in subpopulations of the contiguous United States" as compared to larger Canadian populations, and "[t]he *continued loss* of genetic diversity may lead to inbreeding depression, potentially reducing the DPS ability to persist through reduced reproductive output or reduced survival." (FR-00021-23 (emphasis added).)

Remarkably though, after detailing what can only be described as a grim genetic picture for the wolverine in the United States, the Service brushed the small population size/low genetic diversity issue aside by concluding that: (1) there have been no observed adverse effects as a result of the lack of diversity; and (2) even if there were, because the Service identified genetic effects as a threat only when coupled with the threat of climate change, the fact that the Service no longer views climate change as a threat means genetic effects are also no longer a threat. The Court's analysis above certainly mandates a reconsideration of the latter contention, and on remand the Service shall consider the threats of demographic stochasticity and the loss of genetic diversity due to small effective population size, as compounded by climate change.

As to the former contention, even assuming climate change did not pose a threat to the wolverine, the Service failed to articulate in the Withdrawal how it is that the laundry list of circumstances above do not themselves constitute adverse

effects. The Service acknowledged inappropriately-low short and long term effective population sizes for the wolverine, as well as a documented loss of genetic diversity with no realistic hope of genetic infusion from Canadian populations. Rather than explain why these circumstances are no cause for alarm, the Service simply stated there was no threat because there was no data confirming a threat. In light of the tremendous difficulty associated with studying the wolverine (*see* PR-00737), such conclusory treatment based on a dearth of information is impermissible under the APA and ESA. *See Tucson Herpetological Soc'y v. Salazar*, 566 F.3d 870, 879 (9th Cir. 2009) ("If the science on population size and trends is underdeveloped and unclear, the [Service] cannot reasonably infer that the absence of evidence of population decline equates to evidence of persistence."); *Greater Yellowstone Coal. v. Servheen*, 665 F.3d 1015, 1030 (9th Cir. 2011); *Rocky Mountain Wild v. Salazar*, 2014 WL 7176384 at *5 (D. Mont. Sept. 29, 2014) ("The Service must rationally explain why the uncertainty regarding [a particular issue] counsels in favor of [one conclusion] rather than the opposite conclusion.")

For the above reasons, the Court remands to the Service to reconsider the independent threat to the wolverine posed by population size and genetic diversity.

C. "Significant portion of its range"

Plaintiffs in the consolidated cases challenge the Service's July 1, 2014 SPR Policy as applied to the wolverine in the Withdrawal. They contend that the Service: (1) failed to explain its determinations relative to the southern Rocky Mountains and California's Sierra Nevada, both of which contain suitable wolverine habitat but do not contain wolverine populations; (2) erroneously applied the SPR Policy rather than the Ninth Circuit's two-step "significant portion of its range" test, *see Tucson Herpetological Soc'y*, 566 F.3d at 876; (3) failed to make a determination one way or the other as to whether certain regions of the United States constituted "significant portions of [the wolverine's] range"; (4) failed to consider whether Montana represents a "significant portion of [the wolverine's] range," and whether trapping affects the wolverine in that specific area; and (5) failed to determine whether the habitat projected to be lost due to climate change represents a "significant portion of [the wolverine's] range." Furthermore, Plaintiffs in CV 14-250-M-DLC challenge the SPR Policy on its face, contending that the policy conflicts with the ESA and controlling Ninth Circuit case law because it fails to require the Service to take lost historical range into account when analyzing whether a particular geographical area is "significant" for a given species.

As to Plaintiffs' facial challenge, Defendants counter that the SPR Policy represents a reasonable interpretation of an indisputably ambiguous statute, and that the Court should therefore defer to the Service's interpretation of the statute. With respect to Plaintiffs' as-applied challenge, Defendants maintain that the Service reasonably applied the SPR Policy to the wolverine, and found neither a "concentration of threats that suggests that the DPS . . . may be in danger of extinction in a portion of its range[, nor] portions of the range where potential threats are significantly concentrated or substantially greater than in other portions of the range." (FR-00025.) The Service's ultimate listing decision clearly found no actionable threats to the wolverine in *any* location, a conclusion which the Service must reconsider in light of the Court's analysis concerning the denning-scale effects of climate change and the threat to the wolverine posed by small population size and lack of genetic diversity. The Court's remand to the Service on these issues compels the agency to revisit its SPR analysis, and so, recognizing that the Service's analysis proceeded from a flawed premise, the Court will grant summary judgment on Plaintiffs' as-applied SPR Policy challenge. However, in line with Defendants' deference argument, the Court will deny summary judgment on Plaintiffs' facial SPR Policy challenge.

The parties agree that Plaintiffs' facial challenge hinges on step two of the

agency deference framework articulated in *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-843 (1984).[11] Thus, the test to be applied to the SPR Policy is whether the Service's "interpretation of the statute [was] 'a reasonable policy choice for the agency to make.'" *N. Cal. River Watch*, 633 F.3d at 773 (quoting *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 986 (2005)). If the Service's interpretation constitutes a permissible construction of this portion of the ESA, the Court must uphold the SPR Policy. *Nw. Ecosystem Alliance v. U.S. Fish & Wildlife Serv.*, 475 F.3d 1136, 1143 (9th Cir. 2007).

The substantive portion of the SPR Policy consists of the following four considerations or steps:

> (1) If a species is found to be endangered or threatened throughout only a significant portion of its range, the entire species is listed as endangered or threatened, respectively, and the [ESA]'s protections apply to all individuals of the species wherever found.
>
> (2) A portion of the range of a species is "significant" if

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11. Defendants cite *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1141 (9th Cir. 2001), wherein the Ninth Circuit held that, by geographically qualifying the typically unqualified notion of species extinction using "significant portion of its range" in the "endangered" and "threatened" definitions, Congress rendered the ESA "inherently ambiguous, as it appears to use language in a manner in some tension with ordinary usage." The Court agrees that this analysis, coupled with the fact that the Service had the authority to develop the SPR Policy and did so in exercise of that authority, *see N. Cal. River Watch v. Wilcox*, 633 F.3d 766, 773 (9th Cir. 2011) (citations omitted), satisfies *Chevron* step one.

> the species is not currently endangered or threatened throughout its range, but the portion's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range.
>
> (3) The range of a species is considered to be the general geographical area within which that species can be found at the time [the Service] makes any particular status determination. This range includes those areas used throughout all or part of the species' life cycle, even if they are not used regularly (*e.g.,* seasonal habitats). Lost historical range is relevant to the analysis of the status of the species, but it cannot constitute a significant portion of a species' range.
>
> (4) If the species is endangered or threatened throughout a significant portion of its range, and the population in that significant portion is a valid DPS, [the Service] will list the DPS rather than the entire taxonomic species or subspecies.

(SPR000106.) Plaintiffs' facial challenge focuses on the third prong of the Service's SPR Policy, and to that end they cite numerous cases wherein courts found insufficient the Service's explanation of why lost historical range was not considered part of a particular species' current range. *See Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1145 (9th Cir. 2001) ("We conclude . . . that a species can be extinct 'throughout a significant portion of its range' if there are major geographical areas in which it is no longer viable but once was. . . . The [Service]

necessarily has a wide degree of discretion in delineating 'a significant portion of its range,' since the term is not defined in the statute. But where, as here, it is on the record apparent that the area in which the lizard is expected to survive is much smaller than its historical range, the [Service] must at least explain [its] conclusion that the area in which the species can no longer live is not a 'significant portion of its range.') (citations and internal alterations omitted); *Humane Soc'y of the United States v. Jewell*, 76 F. Supp. 3d 69, 130 (D.D.C. 2014) ("[T]he Final Rule does not provide any explanation for why the territory identified as part of the western Great Lakes DPS in the six states outside the Tri-State Area, or other parts of the Midwest that constitute the western Great Lakes DPS' historical range, are no longer significant portions of the gray wolf's current range."); *Tucson Herpetological Soc'y*, 566 F.3d at 877 (the Service "must develop some rational explanation for why the lost and threatened portions of a species' range are insignificant before deciding not to designate the species for protection").

While the Service's failure to articulate an analysis of lost historical range may be legitimate criticisms in each of these instances, the cases themselves predate the SPR Policy at issue here, and really represent case-by-case challenges to the Service's explanations in discrete listing actions. Thus, the cases do little to support the argument that the Service's current SPR Policy fails to account for

historical range, when the policy itself directs Service field officers and personnel to consider historical range as a factor "relevant to the analysis of the status of the species." (SPR0000106.) Put another way, the cases Plaintiffs cite certainly demonstrate that the Service has failed on more than one occasion to adequately consider lost historical range in the past, but they do not demonstrate that the current SPR Policy fails to prompt the Service to explain its lost historical range analysis in future listing actions. Indeed, the Service included the following discussion of historical range in the SPR Policy:

> The context in which Congress used the term ["range"] is . . . instructive. In the [ESA], "range" is used as a conceptual and analytical tool related to (1) identifying endangered and threatened species under section 4, and (2) identifying areas appropriate for the establishment of experimental populations. In contrast, the concept of "range" plays no direct role in implementation of the key operative provisions of the [ESA] that protect species that we determine are endangered or threatened.
>
> Once [the Service] determine[s] that a species is an "endangered species" or "threatened species," the protections of the [ESA] are applied to the species itself, not the "range" in which it is found. . . . As long as a species is listed, these protections apply to all populations and individuals of the species regardless of how that species' range changes over time (whether the range contracts due to continuing threats or expands as a result of recovery efforts).
>
> Thus, the term "range" is relevant to whether the [ESA]

protects a species, but not how that species is protected. Having concluded that the term "range" is used primarily in determining whether a species qualifies as an endangered species or threatened species, [the Service] must still consider its meaning in that context. The Service[] interpret[s] the term "range" to be the general geographical area within which the species is currently found, including those areas used throughout all or part of the species' life cycle, even if not used on a regular basis. We consider the "current" range of the species to be the range occupied by the species at the time the Service[] make[s] a determination under section 4 of the [ESA].

[The Service] reach[es] this conclusion based on the text of the [ESA]. As defined in the [ESA], a species is endangered only if it "is in danger of extinction" throughout all or a significant portion of its range. The phrase "is in danger" denotes a present-tense condition of being at risk of a current or future undesired event. Hence, to say a species "is in danger" in an area where it no longer exists – i.e., in its historical range where it has been extirpated – is inconsistent with common usage. Thus, "range" must mean "current range," not "historical range."

Some have questioned whether lost historical range may constitute a significant portion of the range of a species, such that the Service[] must list the species rangewide because of the extirpation in that portion of the historical range. [The Service] already take[s] into account in [its] determinations the effects that loss of historical range may have on the current and future viability of the species. [The Service] conclude[s] that this consideration is sufficient to account for the effects of loss of historical range when evaluating the current status of the species, and a specific consideration of whether lost historical

> range constitutes a significant portion of the range is not necessary. In other words, [the Service] does not base a determination to list a species on the status (extirpated) of the species in lost historical range.
>
> Given [the Service's] definition of SPR, [the agency] will arrive at the appropriate status conclusion by considering the effects of loss of historical range on the current status of the species even though [the Service] does not explicitly consider whether lost historical range is itself an SPR.

(SPR000080-81.) Contrary to Plaintiffs' contentions, the Service permissibly construed the ambiguous phrase "significant portion of its range" based on its reading of the ESA – it was reasonable for the Service to determine that "in danger" connoted a present-tense in the "endangered" and "threatened" definitions in 16 U.S.C. § 1532, and that "range" should likewise be construed as present, current range. Moreover, the Service acknowledged the role historical range plays, or should play, in listing decisions, and thus made a reasonable policy decision to take up historical range both as a relevant factor under SPR analysis, and as a factor under § 1533(a)(1)(A). Thus, at *Chevron* step two, the Court defers to the Service with regard to the SPR Policy, and will deny Plaintiffs' motion for summary judgment facially attacking the policy.

D. Whether the DPS is a "species" under the ESA

Finally, the Court addresses the Non-Governmental Intervenors' argument

that the Service is precluded by the plain text of the ESA from listing a subspecies of a species as a DPS. The Non-Governmental Intervenors contend that the ESA "allows the Service to list only three discrete classes of organisms: [a]n entire species, an entire subspecies, or a distinct population segment of an entire species." (Doc. 77 at 8.) Globally, wolverines are part of either the North American subspecies, *Gulo gulo luscus*, or the European subspecies, *Gulo gulo gulo*. The population at issue here, which of course the Service withdrew its proposal to list, is the distinct population segment of the North American wolverine occurring in the United States. Thus, the Non-Governmental Intervenors' argue that the wolverine DPS cannot be listed, and that this entire case begins and ends with their interpretation of the ESA. Their argument is unnecessarily and insupportably restrictive, defies logic, and will not be adopted by the Court.

In 1978, Congress amended the ESA's definition of "species" to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16). The phrase is ambiguous, *see Nat'l Ass'n of Home Builders*, 340 F.3d at 842 & n.8, and the Service issued a policy interpreting it in 1996 as a result. While the 1996 policy includes a number of factors by which the

Service analyzes whether a taxonomic group constitutes a distinct population segment, more generally, the Service "maintain[ed] that the authority to address DPS's extends to species in which subspecies are recognized, since anything included in the taxon of lower rank is also included in the higher ranking taxon." 61 Fed. Reg. 4,722, 4,724 (Feb. 7, 1996). Not only is this interpretation a reasonable construction of the ambiguous statutory phrase, *Nw. Ecosystem Alliance*, 475 F.3d at 1145, it is both an intuitive and logical construction. Every species necessarily subsumes its own subspecies, meaning that a DPS of a subspecies is also a DPS of the larger species. Moreover, the ESA defines "species" to include subspecies, making mere reference to a subspecies statutorily equivalent to referencing a species. Non-Governmental Intervenors' reliance on "[t]he maxim that the express inclusion of one thing implies the exclusion of another thing" is misplaced here, as, by definition, the term species includes all more specific organismal classifications. For these reasons, the Court will deny Non-Governmental Intervenors' motion for summary judgment on this issue.

CONCLUSION

The Service erred when it determined: (1) that climate change and projected spring snow cover would not impact the wolverine at the reproductive denning scale in the foreseeable future, and (2) that small population size and low genetic

diversity do not pose an independent threat to wolverine viability in the United States. By incorporating these determinations into the Withdrawal, the Service's decision against listing the wolverine as threatened under the ESA is arbitrary and capricious. No greater level of certainty is needed to see the writing on the wall for this snow-dependent species standing squarely in the path of global climate change. It has taken us twenty years to get to this point. It is the undersigned's view that if there is one thing required of the Service under the ESA, it is to take action at the earliest possible, defensible point in time to protect against the loss of biodiversity within our reach as a nation. For the wolverine, that time is now.

Accordingly, IT IS ORDERED:

(1) Plaintiffs' motion for summary judgment in CV 14-246-M-DLC and CV 14-247-M-DLC (Doc. 62) is GRANTED IN PART. The motion is GRANTED with respect to the Service's determinations regarding: (a) the threat posed to the wolverine by the effects of climate change at the reproductive denning scale, (b) the threat posed to the wolverine by small population size and lack of genetic diversity, and (c) application of the SPR Policy to the wolverine. The motion is DENIED in all other respects.

(2) Plaintiffs' motion for summary judgment in CV 14-250-M-DLC

(Doc. 65) is GRANTED IN PART. The motion is GRANTED on the same grounds as enumerated above, and DENIED in all other respects.

(3) Defendants' cross-motion for summary judgment in CV 14-246-M-DLC and CV 14-247-M-DLC (Doc. 72) is DENIED.

(4) Defendants' cross-motion for summary judgment in CV 14-250-M-DLC (Doc. 75 in the member case docket) is GRANTED IN PART. The motion is GRANTED with respect to Plaintiffs' facial challenge to the Service's July 1, 2014 SPR Policy. The motion is DENIED in all other respects.

(5) Non-Governmental Intervenors' cross-motion for summary judgment (Doc. 75) is DENIED.

(6) State Government Intervenors' cross-motion for summary judgment (Doc. 78) is GRANTED IN PART. The motion is GRANTED on the same grounds as Defendants' motion in CV 14-250-M-DLC. The motion is DENIED in all other respects.

(7) Energy Industry Intervenors' cross-motion for summary judgment (Doc. 81) is DENIED.

(8) The United States Fish & Wildlife Service's Withdrawal of its

Proposed Rule to list the distinct population segment of the North American wolverine occurring in the contiguous United States as a threatened species under the Endangered Species Act, 79 Fed. Reg. 47,522 (Aug. 13, 2014), is hereby VACATED.

(9) This matter is remanded to the United States Fish & Wildlife Service for further consideration consistent with this order.

DATED this 4th day of April, 2016.

Dana L. Christensen, Chief Judge
United States District Court