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May 8, 2007

Ed Bangs, Western Gray Wolf Recovery Coordinator
U.S. Fish & Wildlife Service
585 Shepard Way
Helena, MT 59601

Re: RIN Number 1018-AU53

Comments on the Proposal to Designate the Gray Wolf Northern Rocky Mountain Distinct Population Segment and to Remove this Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife

Dear Ed:

On behalf of Natural Resources Defense Council, Sierra Club, Jackson Hole Conservation Alliance, and The Humane Society of the United States, we submit the following comments on the U.S. Fish and Wildlife Service ("FWS") proposal to designate the Gray Wolf Northern Rocky Mountain Distinct Population Segment ("DPS") and to Remove the Northern Rocky Mountain Gray Wolf DPS from the list of Endangered and Threatened Species, 72 Fed. Reg. 6106-6139 (February 8, 2007).

Over the past twenty-five years, gray wolves in the Northern Rocky Mountains ("NRM") region have made remarkable progress toward recovery. This progress is worthy of celebration, but it does not warrant a withdrawal of federal protections under the Endangered Species Act ("ESA"). FWS' premature delisting proposal threatens to reverse the conservation gains of the last two decades, putting wolves once again at risk of extinction across the West.

The ecological integrity of the Northern Rockies region, with its outstanding wildlands, is tied to the future of wolves. Wolves function as a "keystone species" which "exist[s] at relatively low abundance, whose effect on the ecosystem is relatively large and involves multiple trophic levels." Montana Wolf Plan, at 9 (citing Power et al. 1996 and Estes 1996). Gray wolves are a "strongly interacting species"—one that deserves special protection because of the beneficial ecological effects they provide (Soule et al. 2005). Eradication or decreased abundance of wolves directly changes habitat and ecosystem function (Soule et al. 2005). The loss of wolves has increased costs for agricultural producers in the Midwest and East, caused the widespread degradation of forests and other ecosystems; resulted in the decline of many species of plants favored by ungulates (Rooney et al. 2004); reduced aspen recruitment and recruitment of riparian cottonwoods and willows causing the local disappearance of beaver wetlands (Beschta 2003); and decreased Neotropical migrant bird diversity due to overbrowsing by moose (Berger et al. 2001). Given wolves' critical ecological function, it is imperative that FWS fulfill its duty under the ESA to ensure the long-term viability of wolf populations and the ecosystems on which they depend.

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Instead, FWS is jeopardizing western wolf populations with a DPS and delisting proposal that violates the ESA. The proposal is based on illegitimate demographic recovery standards; it ignores ongoing threats to wolves' survival, including the inadequacy of existing state regulations to protect wolves post-delisting; and it fails to identify any reliable source of funding to implement management activities that the agency itself believes are necessary to maintain current wolf population levels. Even the proposed DPS is biologically indefensible due to FWS' arbitrary definition of its geographic boundaries.

Rather than building support for wolf population levels that could endure the vagaries of prey base boom-and-bust cycles, disease, climate change, uncertain funding, and hostile political climates, FWS is promoting the misconception that wolves are expendable and can be managed down to bare minimum population levels. Should delisting occur as FWS proposes, the immediate effect will be aggressive "control" actions across much of the wolf's current range in the Northern Rockies, resulting in the killing of hundreds of wolves representing the vast majority of the extant population. Because we strongly object to this ill-advised and illegal approach, we submit these comments on the FWS proposal.

I. FWS FAILED TO PROVIDE A PUBLIC COMMENT PERIOD THAT COMPLIES WITH THE ESA AND THE ADMINISTRATIVE PROCEDURES ACT.

FWS' DPS and delisting proposal fails at the outset because FWS is neglecting to comply with basic procedural requirements. Under the ESA, FWS is required to evaluate and solicit comments on all of the statutory listing factors, including whether a species[1] is at risk of extinction due to, among other factors, the "inadequacy of existing regulatory mechanisms." 16 U.S.C. § 1533(a)(1)(D). Here, it is impossible for FWS or the public to evaluate the adequacy of key regulatory mechanisms because Wyoming and FWS are still negotiating a possible revision to Wyoming state laws and the Wyoming wolf management plan in order to eliminate the currently lethal approach that Wyoming takes toward wolves outside Yellowstone and Grand Teton National Parks. Yet FWS has commenced a comment period.

The Wyoming state laws and regulatory mechanisms must be finalized and in place before the Service solicits public comment on wolf delisting. Otherwise, the public is being asked to assess recovery and delisting when FWS itself has not yet determined that regulatory mechanisms to ensure population viability in the long term are in place. FWS' proposal to accept additional public comment regarding changes to Wyoming law and regulations before delisting, see 72 Fed. Reg. at 6117, does not cure the defective review period. Such piece-meal review of state plans in isolation prevents the unitary review of all of the listing factors, and the manner in which they interrelate, in violation of the ESA and the Administrative Procedure Act.

II. FWS FAILED TO DRAW DPS BOUNDARIES THAT COMPLY WITH THE ESA'S CONSERVATION MANDATE.

[1] The ESA defines "species" to mean an entire species, a subspecies, or a DPS. 16 U.S.C. § 1532(16).

A. FWS Failed To Draw DPS Boundaries Based On Sound Biological Principles.

The ESA gives FWS the authority to list, recover, and delist "species," which are defined to include "distinct population segments" ("DPS"). 16 U.S.C. §§ 1532(16), 1533(a)(1). As FWS has emphasized in its published DPS policy, "[i]t is important in light of the Act's requirement to use the best available scientific information in determining the status of species that this interpretation follows sound biological principles" and, necessarily, "[a]ny interpretation adopted should also be aimed at carrying out the purposes of the Act." 61 Fed. Reg. 4,722 (Feb. 7, 1996). In keeping with this direction, one federal district court has explicitly held that DPS boundaries must be "supported by sound biological principles." Defenders of Wildlife v. Sec'y, U.S. Dep't of Interior, 354 F. Supp. 2d 1156, 1172 (D. Or. 2005) (holding that FWS' creation of DPSs for gray wolves "violated DPS policies" because the DPS boundaries were "not supported by sound biological principles").

Here, FWS has ignored biological principles and compromised wolf conservation in order to draw "boundaries of convenience" along state lines. See 72 Fed. Reg. at 6111-6115. The DPS boundaries do not describe the area where wolves currently exist or even where wolves are likely to be in the future. See id. at 6112 (map depicting wolf presence within DPS boundaries). Further, the DPS boundaries do not take into account habitat needs for a recovered wolf population. Indeed, FWS acknowledges that the DPS includes many areas that the agency deems unsuitable for wolves. See id. at 6113 ("there is little suitable habitat within the portion of the NRM DPS in Washington, Oregon, or Utah"); id. (including entire states of Montana, Wyoming, and Idaho "adds only unsuitable habitat"). And state boundaries reveal nothing about the portion of the population's historic range that the agency is "writing off" for purposes of recovery. Without biological justification, FWS may not rely on the proposed "boundaries of convenience" to define a Northern Rockies DPS.

B. The External Boundary of the Northern Rockies DPS Violates the DPS Policy.

The proposed DPS boundary is improper because it fails to "draw a line around a population whose conservation status differs from other populations within that species." Defenders, 354 F. Supp. 2d at 1170. FWS has instead drawn a boundary for the Northern Rockies DPS that encompasses not only the three areas currently occupied by a wolf population FWS (erroneously) deems recovered, but also vast areas of the surrounding landscape that do not presently contain wolves, including most of Wyoming and portions of Utah, Eastern Oregon, and Eastern Washington. 72 Fed. Reg. at 6112. The delisting rule thereby eliminates protections for wolves outside the currently occupied range of the species even though the biological status of the gray wolf in those areas has not changed from when the wolf was first listed as endangered. FWS, Reclassification of the Gray Wolf in the U.S. and Mexico with Determination of Critical Habitat in Michigan and Minnesota, 43 Fed. Reg. 9607, 9611 (March 9, 1978).

This approach has already been rejected by courts around the country. For example, in rejecting an earlier attempt by FWS to downlist the gray wolf in two large DPS', one district court stated, "[t]he FWS simply cannot downlist or delist an area that it previously determined

warrants an endangered listing because it 'lumps together' a core population with a low to non-existent population outside the core area." Nat'l Wildlife Fed. v. Norton, 386 F. Supp. 2d 553, 565 (D. Vt. 2005). Similarly, in Defenders of Wildlife, another district court rejected the same rule because it "created DPSs that decreased the protection afforded to the species, even though the population status of the wolf was not improved outside of the core recovery areas." Defenders of Wildlife, 354 F. Supp. 2d at 1171. Indeed, FWS has itself stated that "a DPS cannot be designated for an area that is unoccupied by a population of the species of concern." FWS, Final Rule To Reclassify and Remove the Gray Wolf From the List of Endangered and Threatened Wildlife in Portions of the Conterminous United States; Establishment of Two Special Regulations for Threatened Gray Wolves; Final and Proposed Rules, 68 Fed Reg. 15804, 15807 (Apr. 1, 2003). Yet FWS proposes exactly this sort of "lumping" of core areas with unoccupied areas in order to delist wolves across a very large Northern Rockies DPS.

FWS also fails to offer a consistent or compelling justification for the DPS boundaries. FWS attempts to justify its proposed DPS boundaries on grounds that they reflect wolves' long dispersal distances. 72 Fed. Reg. at 6112. The Northern Rockies DPS therefore includes mostly unoccupied portions of eastern Washington and Oregon and north central Utah that are within 180 miles of core wolf populations. Id. at 6113. At the same time, FWS also concedes that, because of human development, "there is little suitable habitat within the portion of the NRM DPS in Washington, Oregon, or Utah," id. at 6113, and that "dispersing wolves attempting to colonize those areas are unlikely to significantly contribute to population recovery," id. at 6118. Not only does this justification entirely fail to address the key requirement of drawing DPS boundaries as set forth by the courts, but by removing ESA protections in these areas, FWS would actually ensure that wolves dispersing into these areas would have little chance of survival.

Taken as a whole, it is clear that the DPS boundary proposed by FWS is designed to protect the currently occupied areas and eliminate potential populations outside those areas. This approach violates the district courts' decisions in National Wildlife Federation and Defenders of Wildlife, and undermines the Endangered Species Act's purpose of protecting and restoring endangered and threatened species and the ecosystems upon which they depend. 16 U.S.C. § 1531(b).

III. FWS FAILED TO ADDRESS SIGNIFICANT REMAINING THREATS TO THE NORTHERN ROCKIES DPS THAT PRECLUDE DELISTING.

A. The Northern Rockies DPS Has Not Achieved Demographic Characteristics Essential to Recovery.

1. There Are Not Enough Wolves In The Northern Rockies To Ensure Population Viability.

Wolves have not yet rebounded to the point of recovery in the Northern Rockies. While FWS stresses that wolf numbers have exceeded the recovery plan goal of at least 300 wolves consisting of 30 breeding pairs distributed across Montana, Wyoming and Idaho, FWS is well aware that this goal has been set too low. Well-established principles of conservation biology

instruct that populations need robust numbers of individuals to remain viable over time. To avoid the adverse genetic effects of inbreeding, early studies estimated that a minimum viable population ("MVP") requires an effective population size (N_e) of 500 individuals (Soule and Wilcox 1980, Frankel and Soule 1981, Soule 1986). Soule and Simberloff (1986) concluded that "estimates of MVPs for many animal species are rarely lower than an *effective size* of a few hundred." Since effective population sizes are generally 10-20% of the census population, this means that a total population count of 2,500-5,000 individuals is necessary to ensure population viability.

Since these early estimates, there have been a number of theoretical and empirical developments in the field of population biology demonstrating that thousands of individuals are needed to maintain healthy, viable populations. Lande (1988) criticized the blanket application of N_e=500 because it does not consider species-specific demographic data. Lande concluded that demographic parameters may require populations to have even larger numbers than an effective population of 500. A number of researchers have also explored these earlier estimates with empirical data. C. D. Thomas (1990) estimated that MVPs should number in the thousands – ideally, 10,000 individuals for populations that experience fluctuations. Reed et al. (2003) estimated the specific MVP for over 100 vertebrate organisms. The mean population value for these vertebrates to maintain viability was estimated to be greater than 7,000 individuals. As part of the analysis, Reed et al. estimated the MVP for *adult* gray wolves (i.e. effective population size) to be 1,403. When these data were corrected for 40 generations worth of data, the MVP for gray wolves was estimated to be 6,332.

Significant advancements have also been made in the field of conservation genetics. Genetic data shows that, historically, wolves in the western US numbered in the several hundreds of thousands (Leonard et al. 2005). Additionally, the genetic diversity of the extirpated North American gray wolves was twice that of the current population. Thus, the current assemblage of gray wolves in the Northern Rocky Mountain area is a profound under-representation both numerically and genetically of the original gray wolves that once occupied this landscape.

Even at the time the gray wolf recovery plan was drafted, FWS had reason to know that it was setting inadequate goals for population size. Since 1987 and 1994, and even since FWS reviewed the recovery plan in 2001, the science of population biology and genetics has advanced significantly, providing further support for wolf recovery standards in the thousands rather than hundreds of wolves. As they stand now, the Service's demographic recovery goals are not consistent with the best available data and should be revised upward to appropriately reflect current scientific knowledge.

2. The Peer Review Process For The Northern Rockies DPS Demographic Recovery Plans Was Biased.

FWS cannot rely on the results of its peer review process to justify the recovery plan's biologically unsound demographic recovery standards, because FWS conducted the process in a biased manner and ignored substantial scientific dissent.

First, as many scientists commented at the time, the process was biased to elicit views consistent with FWS' preferred outcome. Peer reviewers of the recovery plans were presented with three alternative definitions of a viable population and asked to rank the definitions in order of scientific accuracy. Reviewers were also offered a fourth possibility of creating their own definition. One reviewer described the presentation as "artificial and misleading" (Reed Noss). Another reviewer noted, "By limiting the choices to those 3 options approved by the Service, plus a category of 'other', it may unfairly bias the results" (Brian Miller). Other reviewers pointed out that viability is not the same as recovery. Nevertheless, FWS has portrayed the results of this process as a scientific endorsement of its DPS and delisting proposal.

Second, the Service proceeded with its preferred definition of a viable wolf population despite dissent from a considerable number of scientific experts. One of the Service's own employees who was asked to review the recovery plans concluded that the plans were not supported by quantifiable data and that modeling with life history data would be necessary to accurately estimate population viability. See Brian Kelly comments. Several other reviewers expressed the same concern. Mark Shaffer and Martin Smith noted that, "[d]espite the intense study wolves have received in this region, and the wealth of population data that must be available to the Service, the Service has presented no quantitative modeling of the dynamics of the existing populations…Such a modeling effort is essential to gauge the relative worth, from a population viability perspective, of the various definitions you have asked us to consider." Another reviewer, Robert Taylor, wrote, "[t]he fact that the Fish and Wildlife Service has not had the vision to support such a (spatially explicit, individual-based) modeling exercise is not sufficient reason to force me to make wild guesses about the parameters of viability." Brian Miller noted, "[n]one of the definitions offered by the Service is calibrated from the probability, length of time, or specific conditions of survival by 30 breeding pairs of wolves. Unless we are given such information, we are being asked to choose among three 'black boxes.'" John Vucetich, noted that, "[i]t may be generally inappropriate to conduct an opinion poll, even from experts, when no quantitative analyses have been conducted to assess the issues at hand."

In addition to excluding life history data, some of the reviewers noted that genetic problems were likely to become an issue without greater attention to connectivity. Gordon Haber noted that the proposed recovery plan definitions "ignore underlying qualitative – behavioral and genetic – aspects of population biology." Fred Allendorf reviewed the recovery plans with his conservation genetics class and concluded that "the recovery goal of at least 300 wolves is too small to avoid genetic problems in the foreseeable future….Therefore, a population of this size should not considered [sic] to be 'recovered'….Thus, the recovery criteria need to require some gene flow into this population." Dan Pletscher ranked the proposed plans according to their viability, but added, "Without connectivity to Canada, this is unlikely to be viable."

Finally, with what may turn out to be eerie foresight, Dale Seip, a wildlife ecologist, noted during his review:

> Presumably, delisting is not going to result in some rampant slaughter of wolves. It would be useful to state the management consequences of delisting the species….If conditions have been suitable for wolves to increase over the past

few years, so long as those conditions do not drastically change, there is no major risk in delisting. However, if delisting would lead to drastic changes then there would be concern.

Given that the governors of Idaho and Wyoming have pledged to slaughter the majority of wolves in their states upon delisting, the Service should revise its delisting proposal to include standards for delisting that are appropriate for maintaining a truly healthy and viable population of wolves.

3. FWS Failed to Evaluate the Independent Extinction Risks Presented by Dramatic Fluctuations in Population Size and Trend.

The Northern Rockies gray wolf population is not only small, it also suffers from dramatic swings in population size and trends. This environmental stochasticity increases the extinction risk for the Northern Rockies gray wolf population beyond the extinction risk that a small but stable population would face.

For example, wolf numbers in Yellowstone National Park declined from 171 wolves in 16 known breeding pairs in 2004, to 118 wolves in 7 breeding pairs in 2005. 72 Fed. Reg. 6110. FWS claims this population crash may be due to fully occupied habitat, conflicts between packs, reduced elk numbers, or a disease outbreak. Id. Without knowing the cause of this population crash, it is impossible to avert or even predict other similar incidents. Further, irrespective of the cause, the resulting swings in population size associated with disease outbreaks and other environmental stochastic factors (including the ongoing drought and climate change) increase the extinction risk of Northern Rockies wolves. See Goodman (1987) ("persistence time depends strongly on the magnitude of the variance in population growth rate"); Belovsky (1987) ("populations are much more susceptible to extinction if the environment … contributes to variations in birth and/or death rates"); Primack (1993). FWS fails to analyze this well-documented variability of the Northern Rockies gray wolf population size and its impacts on whether the population is threatened or endangered as a result of this environmental stochasticity.

4. The Northern Rockies DPS Demographic Recovery Standards Are An Unexplained Departure from the Substantially Larger Population Targets for Wolves in the Midwest DPS.

FWS' own demographic recovery standards for gray wolves in the Western Great Lakes demonstrate that FWS' recovery goals for the Northern Rockies DPS are insufficient to ensure the population's long-term viability. FWS would only require that the three states that together make up the Northern Rockies DPS maintain a combined total of 30 breeding pairs and 300 wolves. 72 Fed. Reg. at 6108. Yet FWS determined that a much larger population of gray wolves is required to ensure the long-term viability of the Western Great Lakes DPS.

The first delisting criterion for the Eastern gray wolf DPS, which FWS applied to the newly designated Western Great Lakes DPS, states that the survival of the wolf in Minnesota must be assured for the DPS to remain viable. FWS, Final Rule Designating the Western Great

Lakes Populations of Gray Wolves as a Distinct Population Segment; Removing the Western Great Lakes Distinct Population Segment of the Gray Wolf From the List of Endangered and Threatened Wildlife, 72 Fed. Reg. 6052 (Feb. 8, 2007). The FWS 1992 Recovery Plan therefore established a goal for the Minnesota wolf population of between 1,250 and 1,400 individual wolves. This population size was determined necessary to "increase the likelihood of maintaining its genetic diversity over the long term …[and] provide[] resiliency to reduce the adverse impacts of unpredictable demographic and environmental events."[2] Id.

Indeed, when the gray wolf in Minnesota was reclassified from endangered to threatened, the state still supported approximately 1,235 wolves in 138 packs in the winter of 1978–79. 71 Fed. Reg. at 15269. FWS determined that "widespread industrialization, mineral exploitation, and general development could threaten much of the wolf's remaining range," and therefore it was appropriate to maintain the threatened designation for this comparatively large population. FWS, Reclassification of the Gray Wolf in the U.S. and Mexico with Determination of Critical Habitat in Michigan and Minnesota, 43 Fed. Reg. 9607, 9611 (March 9, 1978).

There is no reason from a biological standpoint that the Northern Rockies population of gray wolves requires 950 fewer wolves for viability than the Western Great Lakes population. While the two populations now have separate DPS designations, FWS listed the gray wolf as endangered at the species level (*C. lupus*) throughout the conterminous 48 States and Mexico, (except for Minnesota, where the gray wolf was reclassified as threatened) in 1978. 43 Fed. Reg. 9607. Until FWS explains its arbitrary choice to assign dramatically different demographic recovery thresholds to these similar populations, it cannot delist the Northern Rockies DPS.

5. The Northern Rockies DPS Demographic Recovery Standards Inexplicably Differ From Internationally Recognized IUCN Protocol for Assessing Extinction Threat

The IUCN (or "World Conservation Union") publishes a list of categories and criteria, known as the "Red List Criteria," that it applies to determine species' conservation status world wide. IUCN Red List Categories and Criteria, Version 3.1 (2001). The IUCN employs 5 separate criteria (Criteria A-E) for listing a species as "Critically Endangered," "Endangered" or "Vulnerable." A species is listed under one of these categories of threat if it meets any one of the listing criteria. IUCN's published guidelines for applying Red List Criteria at a regional level state that for regional populations that are isolated, "the Red List Category defined by the criteria should be adopted unaltered." IUCN, Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0, at 13 (2003).

[2] A second delisting criterion requires at least one other, smaller, wolf population within the historical range of the eastern timber wolf to function as a metapopulation for Minnesota wolves. The second population is expected to enhance the "resiliency" and "redundancy" of the recovery program. 72 Fed. Reg. at 6052. If it is isolated from the Minnesota population, it must consist of at least 200 wolves for at least 5 years. If it is within 100 miles of the Minnesota wolf population, it would be considered viable if it maintained a minimum of 100 wolves for at least 5 years. Id.

IUCN's formalized thresholds for evaluating threat of extinction represent internationally accepted standards in population biology, and have been cited and relied upon by FWS in rendering ESA listing decisions as persuasive authority. See 12-Month Petition Finding and Proposed Rule to List the Polar Bear (*Ursus maritimus*) as Threatened Throughout Its Range, 72 Fed. Reg. 1064 (Jan. 9, 2007). The criteria were developed by respected scientists from around the world and constitute the most reputable tool for assessing species status and conservation priorities on a global scale. In addition, at least 57 countries have adopted Red List Criteria, in combination with IUCN's regional guidelines, for use on a national or regional scale.

The IUCN process explicitly requires listing a species as "vulnerable"—which corresponds to the ESA "threatened" listing category—if the population size drops below 1,000 "mature" individuals. Red List Criteria, at 23. An individual is defined as mature if it is capable of reproducing. Id. at 10. This demographic standard addresses the need to maintain genetic diversity within isolated populations. When the number of breeding individuals drops below a certain threshold, the population may lose genetic diversity that is necessary for the population to adapt to changing conditions.

In the case of gray wolves, only a small percentage of the population contributes to the genetic heritage of the population. Pups and one-year old wolves, which are incapable of breeding, comprise a majority of the Northern Rockies wolf population. Among adult wolves, typically only the alpha male and alpha female of a pack reproduce. 72 Fed. Reg. at 6107. In addition, wolves in Yellowstone and Idaho are all descendants of fewer than 100 wolves that were reintroduced in 1995 and 1996. With 1,243 wolves in 89 breeding pairs, the Northern Rockies wolf population is far below the IUCN standards for designating a species or isolated population as "Vulnerable" due to threats to genetic diversity.[3] Id. at 6108. Until FWS explains its departure from well-established international recovery standards that the agency has previously employed in rendering listing decisions, it cannot delist the Northern Rockies DPS.

B. The Northern Rockies DPS Has Not Achieved a Metapopulation Dynamic Essential to Recovery.

The recovery plan and proposed delisting rule both identify a free-flowing metapopulation dynamic among the three recovery areas as essential to the long-term survival of the Northern Rockies gray wolf. Recovery Plan at 13 (1987); 72 Fed. Reg. at 6121. A metapopulation is a population with genetic exchange between subpopulations. 72 Fed. Reg. at 6107. Without genetic interchange among individuals from the three recovery areas, isolated populations of merely 100 individuals after delisting will not exhibit genetic diversity sufficient

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[3] The IUCN downgraded the gray wolf's threat status globally (therefore including wolf populations in Alaska, Canada, Mexico, and Europe) from "Vulnerable" to "Least Concern" in 1996. IUCN generally does not assess distinct populations of species within a particular region, and therefore has no designation applicable to gray wolves in the Northern Rockies. As the Red List Criteria document notes, "taxa classified as Least Concern globally might be Critically Endangered within a particular region …." Red List Criteria, at 8.

to withstand environmental variability and stochastic events. Thus, FWS' delisting proposal concededly hinges on interchange among recovery areas.

However, FWS' finding that the wolves in the Northern Rockies operate as a functioning metapopulation is not supported by the best available scientific evidence. FWS mischaracterizes the two studies it relies upon most heavily to support its determination. See Oakleaf, et al. (2006); Carroll, et al. (2006). The proposed delisting rule does not disclose these studies' key conclusions that connectivity among the three recovery areas is currently poor, dispersal corridors do not at present provide suitable habitat, and opportunities to link gray wolf recovery units will further decline as development increases in these areas. Further, FWS has not evaluated the ability of wolves in the three recovery areas to function as a metapopulation once the number of wolves plummets after delisting.

First, the three recovery areas within the proposed Northern Rockies DPS remain relatively isolated. FWS relied on work by Oakleaf, et al. (2006) to suggest that a functioning metapopulation exists. However, Oakleaf actually determined that "currently there appears to be limited interchange of individuals between the 3 Northern Rockies recovery areas." Id. at 555. In particular, the GYA recovery area is almost entirely isolated from individuals from Central Idaho and Northwest Montana. Just one wolf has been documented to enter the GYA from another recovery area (Idaho) and that individual has not reproduced. Id. at 561 (noting that "5 of the 6 documented dispersals between the GYA and other recovery areas resulted in either death, disappearance or relocation of the disperser"); Doug Smith, pers. comm. The failure of a significant number of individuals to disperse and introduce new genetic material into populations, particularly in the GYA, is itself evidence that dispersal corridors are currently inadequate to promote a functioning metapopulation.

Second, FWS cites both Oakleaf et al. (2006) and Carroll et al. (2006) for its conclusion that "the suitable habitat within portions of these 3 States [Montana, Idaho and Wyoming] is of sufficient quality, extent, and distribution to support a viable wolf metapopulation." 72 Fed. Reg at 6119. However, Oakleaf concludes that potential dispersal corridors are narrow and do not currently contain continuous appropriate habitat. Oakleaf et al. at 560.

Third, Carroll et al. (2006) determined that habitat suitability will decline further with increased population growth and road development on both private and unprotected public lands. Id. at 31; see also id. at 32 (graphic depiction of dramatically diminished suitable habitat within the proposed Northern Rockies DPS boundary in 2025). Thus, Carroll et al.'s guarded determination that recovery goals may be sufficient is explicitly conditioned on the unlikely circumstance "that current habitat conditions do not deteriorate." Id. at 35. Likewise, Oakleaf et al. concluded, "for the northern Rocky Mountain wolf population to effectively function as a metapopulation, it will be desirable to prioritize the protection and perhaps restoration of dispersal linkages between the GYA and other recovery areas." Oakleaf et al. at 561.

Although increased human development represents the most likely scenario within dispersal corridors, FWS discounts the possibility that connectivity will decrease over time due to declining habitat availability. Human population in the west is projected to grow 42%, from 62 million to 88 million, by 2025. Carroll et al. at 30; see also 2007 Colorado College State of

the Rockies Report Card, at http://www.coloradocollege.edu/StateoftheRockies/reportcard.html. Contrary to this undeniable trend, FWS blithely asserts that "we do not predict that changes in … suitable habitat nor land-uses in the foreseeable future in all or a significant portion of the range in the NRM DPS will threaten wolf recovery." 72 Fed. Reg. at 6118. Despite admonitions in the very two studies on which FWS relies, FWS fails even to propose monitoring, protecting, or restoring habitat in critical linkage areas.

Fourth, recent genetic evidence confirms that wolves in the GYA have been completely isolated from wolves in the remainder of the proposed DPS since their introduction over 10 years ago (vonHoldt et al. in press). Given this continued isolation, the relatively small group of wolves in this area will lose genetic diversity and face the effects of inbreeding depression within the next several decades.

Exacerbating all of the above factors limiting dispersal and genetic interchange is the fact that the size of the Northern Rockies wolf population is expected to plummet from over 1200 wolves currently to around 300 wolves after delisting. As the proposed delisting rule recognizes, strong core populations are necessary to "provide a steady influx of dispersing wolves" into potentially suitable wolf habitat. 72 Fed. Reg. at 6119. However, FWS does not evaluate how the dramatically smaller population sizes will affect wolf behavior and the ability or incentive of individual wolves to leave the core recovery areas.

Isolation due to all of these factors not only decreases genetic diversity within each recovery area, it also ensures that wolves will not repopulate areas outside northern Montana, central Idaho, and the Greater Yellowstone area. Accordingly, before delisting, FWS must focus recovery efforts on protection and restoration of dispersal corridors, particularly between Yellowstone and other recovery areas, to achieve the metapopulation dynamics necessary for long-term recovery.

C. Wolves Are Threatened Due to Current and Projected Development, Including Roading.

In evaluating the suitability of lands to provide for wolf recovery, FWS excluded lands where levels of roading and development were excessive. 72 Fed. Reg. at 6113 (characterizing suitable wolf habitat as those areas with "lower road density"). FWS failed to assess how road closures could increase the carrying capacity of lands for prey species and for wolves, or alternatively to evaluate how prospective human developments and roading would affect wolf recovery in the future. For these reasons, the Service's evaluation of habitat degradation and loss was fatally flawed.

Roads, by increasing human contact, negatively affect wolf populations at both local and regional scales. Mech, et al. (1988), Fuller (1989), Thurber, et al. (1994), Mladenoff, et al. (1995), Mladenoff, et al. (1999). Roads are a primary source of habitat fragmentation, which confines species into networks of small patches, thus increasing extinction risks. The threat of habitat fragmentation is acute for species such as the gray wolf, which exists in low densities and occupies large home ranges. Thiel (1985), Jensen, et al. (1986), Mech, et al. (1988), Mech (1989), Fuller, et al. (1992), Mladenoff, et al. (1995), and, Mladenoff, et al. (1999) found that

road densities are an important predictor of the capability of an area to sustain a breeding population of wolves. Wolves are more likely to be killed by humans at higher road densities due to more frequent human-wolf encounters. Wydeven, et al. (2001). While greater human tolerance of wolves may change the precise level of human-caused mortality associated with particular road levels, increasing road and human access levels decreases carrying capacity for wolves. Id. Conversely, the absence of roads is beneficial for wolves; roadless areas enhance habitat quality for wolves.

Because levels of roading affect the carrying capacity of the landscape for wolves, Carroll, et al. (2006) included levels of roading in their evaluation of wolf habitat. Their spatially explicit model of wolf habitat found that the amount of wolf habitat could increase significantly if existing roads on public land are closed or removed. Id. at 31.

For all these reasons, the level of roading and associated human presence has a significant impact on the wolf presence and abundance by directly affecting human-caused wolf mortality levels. Roads also have a direct affect on the abundance of prey species like elk. Roads affect elk distribution and population numbers. Elk avoid areas near open roads; in areas of higher road density, elk exhibit higher levels of stress and increased movement rates. Rowland, et al. (2005). Roads and motorized trails built into elk habitat for timber management and other activities increase hunter access and elk vulnerability to harvest. Elk vacate otherwise suitable habitats to avoid human activity and may not return for several years. Id. See IFG Progress Report for 2005-2006 on Big Game Population Status, Idaho Fish and Game (2006).

Because roads adversely affect wolf distribution and abundance by affecting mortality levels and the abundance of prey species, analysis of current and projected levels of roading are essential to evaluate wolf recovery in the future. Absent the protection of important habitat, many western landscapes will become unsuitable for wolves. Carroll, et al. (2006). The Service erred by failing to evaluate the impact of road development on associated human-caused wolf mortality, prey distribution and abundance, and effective use of connecting corridors between core wolf areas. This analysis must consider both existing and projected levels of roads and consider whether removing roads in certain areas is essential for wolf recovery.

D. FWS Must Analyze Threats to Wolf's Existence Well Beyond Thirty Years.

Under the ESA, a "threatened species" is defined as "any species which is likely to become an endangered species within the *foreseeable future* throughout all or a significant portion of its range." 16 U.S.C. § 1532(20) (emphasis added). The plain meaning of "foreseeable" is: "being such as may be reasonably anticipated <*foreseeable* problems>" or "lying within the range for which forecasts are possible <in the *foreseeable* future>." Merriam-Webster's Online Dictionary. See also Black's Law Dictionary (8th ed. 2004) (defining "foreseeability" as "[t]he quality of being reasonably anticipatable").

Contrary to this plain meaning, the gray wolf delisting proposal defines "foreseeable future" as thirty years. 72 Fed. Reg. at 6115. Based on the best available scientific evidence, it is possible to make scientifically reliable and sensible projections on gray wolf population status

well beyond thirty years. Accordingly, FWS must adopt a longer timeframe for analyzing threats to the NRM wolf population.

1. Consideration of extinction risk over at least one hundred years is easily justified.

While the draft delisting proposal defines "foreseeable future" as thirty years, viability analyses of mammalian populations typically look forward one hundred years. Shaffer (1978) in his pioneering analysis of the Yellowstone grizzly bear population investigated whether model populations would have "a 95% chance of remaining extant for 100 years." Other analyses of mammalian extinction risks have routinely employed a hundred-year time frame (Dennis et al. 1991, Saether et al. 1998, Wiegand et al. 1998).

Adequate consideration of population genetic issues often involves looking at orders of magnitude more than three generations (e.g. Tables 2 and 3 of Lande 1995). Indeed, Allendorf and Ryman (2002) explicitly state that "consideration of genetic effects over time frames beyond 100 years is also important for the long-term viability of populations and species." Although the draft delisting proposal does not undertake a genetic analysis, the Northern Rockies gray wolf population is already well below an effective population size of 5000, which is the minimum necessary for a genetically viable population predicted by some analyses (Lande 1995).

Where, as here, the scientific data permits long-term predictions, the ESA requires consideration of extinction risks over periods of one hundred years or more. See 16 U.S.C. § 1533 (b)(1)(A) (FWS must base listing decisions on the best available scientific data).

2. FWS often uses one hundred-year time frames to evaluate extinction risk.

The USFWS and NMFS have previously adopted one-hundred-year time frames when evaluating whether species should be listed under the ESA. For example, when NMFS made a listing decision for the Steller sea lion, it considered extinction threats employing a one-hundred-year time frame. 62 Fed. Reg. 24345, 24346 (May 5, 1997). See (http://nmml.afsc.noaa.gov/AlaskaEcosystems/sslhome/StellerDescription.html); see also 67 Fed. Reg. 44133, 44137 (July 1, 2002) (listing decision employing a one-hundred year time frame to evaluate the extinction risk faced by orca populations). Likewise, status reviewers for the greater sage grouse listing agreed that one hundred years was within the "foreseeable future." 72 Fed. Reg. at 1070 (citing 70 Fed. Reg. 2244); see also, 72 Fed. Reg. 14866, 14910 (March 29, 2007) (FWS grizzly bear delisting decision adopting, but failing to employ, a flexible "foreseeable future" standard that uses all available scientific data concerning future projections).

3. The IUCN listing process uses one hundred-year time frames and data.

The IUCN Red List process explicitly evaluates extinction risks over one hundred-year time spans. The IUCN employs five separate criteria (Criteria A-E) for listing a species as "Critically Endangered," "Endangered" or "Vulnerable." A species is listed if it meets any of the listing criteria. The IUCN process contemplates the possible use of one hundred-year scientific analyses in numerous places (criteria A3, A4 and E for Critically Endangered; criteria A3, A4,

C1, and E for Endangered; criteria A3, A4, C1, and E for Vulnerable). The IUCN process explicitly requires listing a species as "Vulnerable"—which corresponds to the ESA "threatened" listing category—if a one-hundred-year quantitative analysis demonstrates that "the probability of extinction in the wild is at least 10% within 100 years" (IUCN 2001).

Because FWS is legally required to assess extinction risks that lie within the "range for which forecasts are possible," FWS erred in limiting its analysis of whether the gray wolf should be listed as a threatened or endangered species to a thirty-year time frame. FWS must evaluate the extinction risk that gray wolves face over the next one hundred years or longer. Upon considering extinction risks over the next one hundred years or more, FWS will find that the gray wolf should be listed as a threatened or endangered species.

E. The Northern Rockies DPS Remains Threatened Within A Significant Portion Of Its Historic Range.

The delisting proposal also fails to address adequately whether gray wolves are still threatened or endangered in "any significant portion" of their range. 16 U.S.C. § 1532(6). FWS must consider whether there are "major geographical areas in which [a species] is no longer viable but once was." Defenders of Wildlife v. Norton, 258 F.3d 1136, 1145 (9th Cir. 2001). If these currently unoccupied areas constitute a significant portion of the gray wolves' historic range, that must figure into FWS' delisting analysis. See id. at 1145-47 (holding that FWS violated the ESA in failing to consider whether developed private lands within the historic range of the Flat-tailed Horned Lizard were "a significant portion" of the lizard's range). In the proposed delisting rule, however, FWS ignores wolves' historic range within its proposed DPS, instead assuming that the entire range of gray wolves is the DPS area *currently* occupied by gray wolves. Based on this circular definition of "range," FWS states that "[b]ecause the gray wolf occupies all of its range within this DPS, we conducted the following threats assessment over the entire current range of the gray wolf and throughout all suitable habitat within the DPS." Id. Thus, FWS focuses exclusively on the area where gray wolves are now without regard to the much larger area where gray wolves once were. As a result, FWS fails to consider whether gray wolves are still imperiled in any significant portion of its DPS range that is currently unoccupied. This violates the ESA. See Defenders, 354 F. Supp. 2d at 1165 (rejecting FWS' attempts to "define 'significant portion of its range' as the areas that ensure viability within the DPS").

The Ninth Circuit in Defenders did not expressly state under what circumstances, if any, FWS may deem historic range insignificant for the purpose of applying the Endangered Species Act's listing factors. However, the court indicated at least two situations that *do not* justify such a finding: (1) the mere fact that a species no longer exists in an area does not justify FWS' finding that the area is not a significant portion of the range; and (2) the fact that a species is viable in one area of its historic range does not support a conclusion that other unoccupied areas of historic range are insignificant.

In the delisting proposal, FWS fails to justify why potential habitat outside the core recovery areas is not a significant portion of the population's range. FWS asserts that wolves' vast, currently unoccupied historic range within the DPS is insignificant because "dispersing wolves attempting to colonize those areas are unlikely to significantly contribute to population

recovery," 72 Fed. Reg. at 6118, or "viability," id. at 6119. See also id. at 6119 (parts of Oregon, Washington, and Utah are not significant portion of the range because any wolf packs forming there "would not be essential for [the NRM wolves'] continued existence"). However, applying the Ninth Circuit's decision in Defenders, a district court in Oregon has already rejected this precise approach to gray wolf delisting: "By ruling out all other portions of the wolf's range because a core population ensures the viability of a DPS, the Secretary's interpretation 'has the effect of rendering the phrase [significant portion of its range] superfluous.'" Defenders, 354 F. Supp. 2d at 1168 (quoting Defenders, 258 F.3d at 1142).

Furthermore, FWS' claim that human population growth and road development renders most of the DPS unsuitable for wolves, and therefore insignificant, is illogical. 72 Fed. Reg. at 6113, 6119. FWS notes Carroll et al.'s conclusion that presently suitable habitat outside of core recovery areas may become unsuitable by 2025 due to human development. 72 Fed. Reg. at 6113. Carroll did not conclude, however, that this 2025 scenario was inevitable. Indeed, Carroll's tepid endorsement of FWS' recovery goals explicitly relied on the assumption that currently available habitat would *not* be degraded. Carroll et al. at 35. To sacrifice this portion of wolves' historic range due to current or future threats due to development turns the Endangered Species Act on its head. The Act's protections are meant to protect species from such threats. Similarly, the fact that every wolf that dispersed to Oregon, Washington and Utah died or was relocated does not render those areas insignificant. 72 Fed. Reg at 6114. The absence of wolf packs in these states argues for wolves' continued listing as endangered, not for delisting.

F. The Northern Rockies DPS Is Threatened By The Loss Of Historic Range.

While FWS correctly states that it must consider whether to delist the gray wolves population based on the ESA's five listing factors, the proposed delisting rule contains no analysis of the "curtailment" or loss of the gray wolf's historic range. Given that gray wolves now occupy only a tiny fraction of their historic range in the lower-48 states, and given that the Northern Rockies gray wolf population is itself so small that it requires the influx of genetic material from other wolf populations to ensure its continued viability, this is a glaring omission. In order to comply with the ESA, FWS must explain why the gray wolf is no longer threatened by the dramatic loss of its historic range.

G. The Gray Wolves in the Northern Rockies Are Threatened By Inadequate State Laws and State Wolf Management Plans.

1. The Idaho Regulatory Framework Is Inadequate.

FWS contends that "existing regulatory mechanisms" are sufficient to protect gray wolves in Idaho in the absence of the protections of the ESA, relying on the Idaho Wolf Conservation and Management Plan ("Idaho Plan"). 72 Fed. Reg. at 6128. The Idaho Plan was prepared by the Idaho Legislative Wolf Oversight Committee and amended and adopted by the Idaho Legislature in March of 2002. Neither the plan nor Idaho law provide adequate protections for wolves.

As an initial matter, the Idaho plan is too vague to allow FWS to conclude that it provides a sufficient regulatory basis for the continued protection of wolves in the State. For example, the Plan provides no specifics regarding how many wolves Idaho will attempt to protect, or how many wolves Idaho will kill. The Idaho Plan states that "Wolf population estimates are, at best, approximations, and establishment of specific population sizes to be maintained is not realistic." Idaho Plan at 4 (emphasis added). Thus, Idaho disavows the intention to manage for any particular wolf population level.

Similarly, the Idaho Plan concludes that wolves in Idaho will need to be killed both by sport hunting and by other means as well:

> If it can be shown that wolves can expand their range without causing unacceptable conflict, they will be allowed to do so. However, population growth is unlikely to be controlled by sport hunting.

Idaho Plan at 4. Given that Idaho fails to explain or limit the phrase "unacceptable conflict" in any way, this language provides virtually unlimited authorization to kill wolves by sport hunting and other, unspecified, means.

The Idaho Plan's pervasive vagueness is all the more significant in light of recent pronouncements by Idaho Governor Butch Otter that Idaho will seek to kill as many wolves as possible. See "For Wolves, a Recovery May Not Be the Blessing It Seems," New York Times, February 6, 2007, ("In Idaho, the governor is ready to have hunters reduce the wolf population in the state from 650 to 100, the minimum that will keep the animal off the endangered species list.").

The Idaho Plan also embraces contradictory goals for wolf management. The Plan states that the goal is to manage wolves to prevent relisting under the ESA, and specifies that:

> The wolf population will be managed at recovery levels that will ensure viable, self-sustaining populations until it can be established that wolves in increasing numbers will not adversely affect big game populations, the economic viability of IDFG, outfitters and guides and others who depend on a viable population of big game animals.

Idaho Plan at 18. This language raises the questions whether Idaho's commitment is to manage wolves or big game populations at viable, self-sustaining levels, and if there is a commitment to maintain wolves in Idaho, whether it is conditioned on a lack of adverse impacts on big game populations or alleged adverse economic impacts on IDFG, outfitters and guides, and others.

The Idaho Plan was further weakened when the Idaho Legislature amended the plan to allow the Idaho Fish and Game Commission to designate the wolf as a predator. The only limitation on the predator designation is that it must provide for controlled take after delisting. Idaho Plan at 4. Thus, instead of unregulated taking by any means, this predator designation means that legal wolf killing must be either State action or specifically authorized by the State.

The Idaho Plan does not restrict the number of wolves that could be killed, whether by state officials or by private individuals pursuant to state authorization, via permit or regulation.

Additionally, the Idaho Plan includes potentially limitless authority for private persons to take wolves. The Idaho Plan states that: "[u]pon delisting, every individual has the right to protect their person and property, on private, state, and federal lands from wolf depredation." Idaho Plan at 4. This unqualified right to protect "person and property" would apparently allow anyone to shoot on sight wolves in proximity to pets or livestock, or even wolves in proximity to a human who feels threatened by wolf presence. Idaho law requires that in implementing the Idaho Plan, the office of species conservation and the IDFG must "take into consideration, local economies, custom, culture, and private property rights." Idaho Code § 36-715(5).

Virtually the only provisions of the Idaho plan that are not discretionary are those that specify what management regime would apply to wolves in Idaho. The Idaho plan distinguishes between "Management" and "Control," which refers to depredation control. With more than 15 packs in Idaho, wolves would be "managed under IDFG Commission regulations, similar to black bears and mountain lions." Idaho Plan at 5. At less than 15 packs in the state, the Idaho Plan contains no additional restrictions on management, but merely requires the IDFG to conduct a "review of management policy to determine if changes are needed to maintain wolf population." Id. The Idaho Plan imposes no substantive constraints on the discretion of the Commission to authorize whatever taking of wolves it deems appropriate, even when fewer than 15 packs exist within the state. See also Idaho Code § 36-1101 (taking of wildlife unlawful except by statute or IDFG Commission rule or proclamation).

In contrast to the unvarying standards for "Management" of wolves in the Idaho Plan, depredation "Control" does change when fewer than 15 packs exist in Idaho and "becomes increasingly stringent until at ‹10 packs it reverts to the control plan specified in the final rule (50 CFR Part 17, page 80270)." Id. Even if fewer than 10 packs exist in Idaho, the Idaho plan allows lethal control of wolves when "unusual circumstances absolutely necessitate the use of lethal control to end the depredation problem." The Idaho Plan fails to indicate either what Idaho considers usual or unusual circumstances.

Exacerbating the lack of limitations on wolf killing is the Idaho Plan's failure to ensure protection of at least 15 "breeding pairs" of wolves. Clearly, Idaho understands the difference between a "breeding pair" of wolves and a wolf pack. The Idaho Plan states that the "# Breeding pairs = # of male-female pairs that produce a minimum of 2 pups that survive to December 31 of the year of their birth." Id. at Table 2, note 1. Idaho Fish and Game defines a pack as "a verified group of wolves traveling together that does not meet the breeding pair definition." Wolf Population Status 1995-2005, at http://fishandgame.idaho.gov/cms/wildlife/wolves/pack_status.cfm. Two or three wolves traveling together at any time of the year would meet Idaho's definition of pack. Under this definition, Idaho's commitment to maintain 15 packs could equate to only 30-45 wolves.

Thus, the only binding restrictions in the Idaho Plan—which imposes limitations solely on depredation control, not authorized taking—would only be triggered when fewer than 10 packs, *not* breeding pairs of wolves exist in Idaho. Idaho Plan at 5. FWS correctly rejected

Wyoming's attempt to stray from the FWS recovery standard of maintaining at least 10 breeding pairs of wolves. FWS must likewise reject Idaho's plan for its failure to ensure that minimum recovery standards are met.

Lest there be any confusion concerning how Idaho might interpret these clearly inadequate provisions of the Plan, one need only look to the Executive Summary of the Plan, where the State legislature reaffirmed that:

> The state of Idaho is on the record asking the federal government to remove wolves from the state by the adoption in 2001 of House Joint Memorial No. 5. The position reflected in House Joint Memorial No. 5 continues to be the official position of the State of Idaho.

Idaho Plan at 4. Joint Memorial No. 5 demanded "that wolf recovery efforts in Idaho be discontinued immediately and wolves be removed by whatever means necessary." In its findings, the Idaho Legislature determined that wolf recovery "has no basis in common sense, legitimate science or free-enterprise economics," that "wolves are not a game animal; they are predators and should be managed as such;" and that

> wolves should be immediately delisted and the federal government should be financially responsible for all damages created by wolves, not only to livestock, but for domestic animals, pets and especially for damages to Idaho's wildlife.

Accordingly, the Idaho Legislature resolved that "wolf recovery efforts in Idaho be discontinued immediately, and wolves be removed by whatever means necessary." In its Statement of Purpose, the Idaho Legislature stated:

> In 1994, wolves were reintroduced into Idaho by the U.S. Fish and Wildlife Service, an activity opposed by the Idaho Legislature. Historically, wolves were eliminated in Idaho in recognition that an agricultural economy could not co-exist with an exploding predator wolf population. In year 2000, it is apparent that successful re-introduction of wolves has re-established a negative economic impact for farmers, ranchers, and small rural communities that are agriculturally based. The ravaging of domestic livestock and Idaho wildlife will increase, no matter the faulty management tool designed to mitigate these losses, and has reached an intolerable level with no end in sight. This memorial calls for discontinuance of the wolf recovery program in Idaho and the immediate removal of wolves. This memorial further calls for immediate de-listing and monetary remuneration from the Federal Government for all damages created by wolves, not only to livestock, but for domestic animals, pets and especially for damage to Idaho's wildlife.

Id. Similarly, Idaho law provides that: "[n]otwithstanding the classification assigned to wolves, all methods of take … shall be authorized for the management of wolves in accordance with existing laws or approved management plans." Idaho Code § 26-201.

Even if the Idaho Plan were sufficiently protective of wolves, which it is not, it is an inadequate regulatory mechanism because there is no means to enforce the plan should Idaho choose to ignore it. Idaho law provides that "[s]tate management plans shall be subject to public notices and comment but shall not be subject to judicial review." Idaho Code § 67-818(3)(b).

Moreover, the legislature has not made compliance with the Idaho Plan mandatory. Instead, it provides that wolves must be managed "in accordance with existing laws *or* approved management plans." Idaho Code § 26-201 (emphasis added). Management in accordance with existing laws is cold comfort to wolves because, absent federal protections, Idaho law will allow State entities to "control" wolves as predators. The Department of Agriculture's administrative regulations define predatory animal as "An animal which needs to be controlled in order to protect land, water, wildlife, livestock, domesticated animals, human life, or crops." IDAPA § 02.01.03 (rules regarding airborne control of unprotected or predatory animals). Although currently only coyotes and red fox are designated predators under this regulation, additional animals may be designated "after consultation with the Idaho Department of Fish and Game." Id. The Idaho Fish and Game Commission is statutorily prohibited from itself designating predators, Idaho Code § 36-201, and regulations do not provide Fish and Game veto power of designations by the Department of Agriculture. Therefore, regardless of what management regime would apply to wolves under Idaho's wolf management plan, wolves may be declared "predatory animals" by the Department of Agriculture and subjected to virtually unregulated killing in at least three ways: (1) The commissioners of each county have "full power and authority to declare any predatory animal … that feeds upon, preys upon or destroys any poultry or livestock of any kind upon any public or private lands within their respective counties … to be agricultural pests, and to take all steps that they may deem necessary to control such pests," id. § 25-2601; (2) the State Department of Agriculture is similarly authorized to "take all steps that are deemed necessary to prevent and control damage or conflicts on federal, state, or other public or private lands caused by predatory animals… that are injurious to animal husbandry, agriculture, horticulture, forestry, wildlife and human health and safety," id. § 22-103(24); and (3) the state animal damage control board also has authority to prevent and control "damage caused by predatory animals," id. § 25-2612A.

Separate from the authority of state agencies to declare and "control" wolves as predators, "livestock owners, their employees, [and] agents" may "dispose" of predators that molest livestock without a permit. Id. § 36-1107(b). Idaho law goes even further, however, in providing that "[l]ivestock owners may take steps they deem necessary to protect their livestock." Id. (emphasis added). There is no limitation on what steps a livestock owner may take, or even on when such steps are "necessary." The law leaves it entirely within a livestock owner's discretion to target wolves using M44s, trapping, shooting, dynamite, or any other means, either in response to depredation or preemptively.

For all of the foregoing reasons, delisting of the gray wolf in the Northern Rockies DPS is inappropriate and illegal because regulatory mechanisms in Idaho are insufficient to protect the wolf from harassment and mortality absent the protections of the ESA.

2. The Wyoming Regulatory Framework Is Inadequate.

As FWS itself makes abundantly clear, regulatory mechanisms in Wyoming represent an affirmative threat to the survival of gray wolves. FWS has stated that it will not delist wolves in Wyoming unless Wyoming's wolf management statute and implementing management plan are amended to conform to federal recovery standards.

The Wyoming legislature enacted House Bill No. 213 in its most recent legislative session to provide for wolf management within the State post-delisting. The preamble to HB 213 sets the tone for Wyoming's entire statutory scheme as for wolf management when it describes the Act as "providing for aggressive management of wolves." If FWS were to accept current Wyoming law as it pertains to wolf management and predator control, it would virtually guarantee the necessity of relisting wolves in the near future to avoid extinction in Wyoming.

Wolf management in Wyoming is the responsibility of both the Department of Agriculture, governed by title 11 of the Wyoming statutes, and the Department of Game and Fish, governed by title 23. Statutory provisions guiding both of these departments are alarmingly hostile to wolves. Wolves are currently classified by Wyoming as "predatory animals" throughout the state. Wyo. Stat. §§ 11-6-302(a)(ix)(B), 23-1-101(a)(viii). The new legislation, which would apply only after delisting, would classify wolves as a "predatory animal" throughout most of the state, Wyo. Stat. §§ 11-6-302(a)(ix), 23-1-101(a)(viii)(B), except for a small northwest corner in which wolves will be classified as "trophy game,"[4] id. §§ 11-6-302(a)(x), 23-1-101(a)(viii)(B)(II). The "predatory" designation allows widespread use of virtually every means of extermination implemented by anyone, thus ensuring that wolves will not survive on lands where wolves are so designated. See 72 Fed. Reg. at 6129 (listing potential methods of take under Wyoming's predator law, including: shoot on-sight; baiting; possible limited use of poisons; bounties and wolf-killing contests; locating and killing pups in dens including use of explosives and gas cartridges; trapping; snaring; aerial gunning; and use of other mechanized vehicles to locate or chase wolves down); id. ("These types and levels of take would most likely prevent wolf packs from persisting in areas of Wyoming where they are classified as predatory, even in otherwise suitable habitat.").

As to hunting restrictions on those lands where wolves are designated as a "trophy game" species, the new legislation directs the Wyoming Game and Fish Commission "to regulate [within the trophy game area] the number of gray wolves which may be taken under a [hunting] license issued under this act or as necessary to carry out the commission's duties under this act." Wyo. Stat. § 23-1-302 (a)(xxix). However, the commission may limit its issuance of hunting permits for the killing of wolves labeled trophy game "*only* as necessary to reasonably ensure at least seven (7) breeding pairs" outside of national parks. Id. § 23-1-304(a) (emphasis added); see also id. § 23-1-304(n) (commission must grant hunting permits to

[4] The final trophy game boundary has not been established; the legislature has provided a geographical range and directed the governor to negotiate with FWS to establish a mutually acceptable boundary within the constraints set by the legislature. Wyo. Stat. § 11-6-302(a)(x)(B)(II).

landowners and livestock owners to kill wolves in trophy game areas as long as Wyoming maintains seven breeding pairs outside of national parks). The requirement that Game and Fish issue hunting licenses to manage down to seven breeding pairs outside the national parks virtually ensures that the Wyoming wolf population will fall below FWS' already inadequate recovery standards.

Moreover, the requirement that Game and Fish reserve seven breeding pairs in Wyoming from hunting does not apply to lethal wolf control activities to protect big game species. "Notwithstanding other provisions of [title 23] … the [game and fish] department shall manage the gray wolf population as necessary to ensure the long-term health and viability of any big game animal herd that is being threatened in this state." Id. § 23-1-304(e). State law could therefore require the complete elimination of wolves within Wyoming outside of the national parks if the State deems the action "necessary" to protect big game. And it is clear that Wyoming officials perceive wolves as a substantial threat to the State's game populations. Governor Dave Freudenthal has stated wolves' impact to wildlife is "unacceptable," and that reducing the wolf population is "essential for both wildlife and domestic livestock."[5]

The take of depredating wolves in Wyoming is similarly unrestricted by a requirement to maintain a minimum number of breeding pairs. The Game and Fish Commission is authorized "to use aggressive management techniques … to protect private property, including, but not limited to, livestock and other domesticated animals from wolf depredation." Id. § 23-1-304(g). Additionally, landowners are authorized to take wolves "doing damage to private property" without a permit, as long as they later notify Wyoming Department of Agriculture of the killing, id. § 23-3-115(c), and game wardens may take trophy game animals, including wolves, that "are doing substantial damage" to property, Game and Fish Comm'n Regs., Ch. 56, § 2. Because Wyoming law does not limit the number of wolves that may be killed to prevent property damage and depredation, there is no way for the State to ensure that take does not cause the wolf population to drop below the minimum number of breeding pairs established by FWS.

Moreover, the trophy game area is virtually meaningless. Even within the trophy game area, the Game and Fish Commission is authorized to establish zones "in which trophy game animals may be taken … in the same manner as predatory animals without a license." Wyo. Stat. § 23-1-302(a)(ii); 23-3-103(a) (emphasis added). Wolves may therefore have a *de facto* "predator" label in any part of the state at the Commission's discretion. Further, Wyoming law permits the Game and Fish Commission to diminish the trophy game area by rule if it "determines the diminution does not impede the delisting of gray wolves and will facilitate Wyoming's management of wolves." Id. §§ 11-6-302(a)(x)(B)(I), 23-1-101(a)(xii)(B)(I). This provision is nonsensical as written, since it refers to future delisting, yet is only effective after delisting is accomplished. If the phrase is interpreted literally, the only constraint on the Commission's modification of trophy game boundaries is that the diminution "facilitate" wolf management. Alternatively, if the provision is interpreted to allow diminution of the trophy game area as long as the commission determines it will not cause wolf *re*listing, the provision

[5] Knickerbocker, B., Gray wolves may lose US protected status, The Christian Science Monitor, Feb. 1, 2007; Royster, W., Wyo targets wolf packs, Caspar Star-Tribune, Dec. 31, 2006.

undermines the entire Wyoming statutory scheme as it applies to wolves deemed trophy game. The provision includes no standards that would guide the commission's determination to change trophy game boundaries. Once the wolf is delisted, there is no protective measure—either in state or federal law—that could prevent the commission from eliminating the trophy game area entirely.

Outside of the trophy game area as proposed in HB 213, where numerous wolf packs reside, it will be open season on wolves. Wyoming law not only lacks restrictions on the taking of wolves deemed predators, it actively encourages it. The Game and Fish Commission has no delegated authority to regulate wolf killing in areas where they are labeled predatory animals. Individuals may hunt wolves by any means, at any time, and in any amount. Further, to the extent that wolves are deemed a threat to property, livestock, or wildlife, the State will subsidize their killing. Wyoming law designates each county a "predator management district." Id. § 11-6-201(a). The board of directors for each predator management district consists entirely of livestock owners and, in some circumstances, sportsmen and hunters. Id. § 11-6-202(a). The districts are required to "[d]evise and put in operation those methods that best manage or control damage caused by predatory animals," and is authorized to pay bounties. Id. §§ 11-6-205(a)(ii), 11-6-206. Wyoming law also created the Wyoming animal damage management board (ADMB), which accepts applications for assistance to prevent and mitigate damage by predatory animals. See id. § 11-6-304; ADMB Reg., Ch.1, § 1. In 2006 alone, $5.7 million was appropriated to the ADMB to assist funding predator management districts. ADMB, 2006 Annual Report, at http://www.wyadmb.com/reports/06legisreport.pdf.

For these reasons, Wyoming law is not an adequate regulatory mechanism to ensure Wyoming's wolf population remains above recovery thresholds.

3. The Montana Regulatory Framework Is Inadequate.

The proposed delisting rule also concludes that "existing regulatory mechanisms" are sufficient to protect gray wolves in Montana, relying on Montana law and Montana's Gray Wolf Conservation and Management Plan ("Montana Plan"). 72 Fed. Reg. at 6127-6128. Neither Montana law nor the Montana Plan provides adequate regulatory protections for wolves.

Montana law is plainly insufficient to protect wolf populations within the State. Montana law defines "predatory animal" to include coyotes, red fox, "and any other individual animal causing depredations upon livestock." Mont. Code Ann. § 81-7-101. Chapter 7, Predatory Animal Control, of Title 81, Livestock, contains six parts which pertain to control of predators in the state of Montana. Instead of providing a global exemption from the predator control provisions of Montana law, in passing SB 163 in 2001, the Montana legislature exempted the gray wolf only from two specific sections of Chapter 7, Title 1, which pertain to control actions taken by the Montana Department of Livestock ("DOL"). Mont. Code Ann. § 87-5-131(3) (requiring that DOL predator control actions pursuant to Mont. Code Ann. §§ 81-7-102 and 81-7-103 be consistent with Montana's wolf management plan). Left unaffected by this limited repeal are four other statutory predator control provisions. Under Mont. Code Ann. § 81-7-104, Montana DOL is authorized to use "any means of effective predatory animal destruction and control, including systematic hunting and trapping and the payment of bounties" on private

lands, state lands, or federal lands. Under Mont. Code Ann. § 81-7-302, county commissioners shall "conduct a predatory animal control program" for the protection of sheep that is recommended by "organized associations of sheep growers in the county." Under Mont. Code Ann. § 81-7-505, any resident landowner may conduct aerial hunting of predatory animals without permit, provided the landowner annually provides notice to DOL. Under Mont. Code Ann. § 81-7-602, county commissioners may establish predatory animal control programs at the request of "an organized association of cattle producers in the county." Id. Nowhere does FWS confront the provisions of Montana's predatory animal control law that will become effective upon removal of the wolf from the federal list of endangered species. Given the extensive overlap of livestock with the current and expected range of the gray wolf in Montana and FWS's rejection of Wyoming law because of its "predator" designation, Montana law fails to provide adequate regulatory mechanisms for gray wolves.

In addition to the Montana's predatory animal control program, even the statutory directives applying to Montana Fish, Wildlife, & Parks ("FWP") fail to protect gray wolves. Under Mont. Code Ann. § 87-1-217, wolves are designated "large predators." In managing large predators, the primary goals of the Montana FWP are not directed toward species recovery, but instead directed toward preserving citizens' opportunities to hunt large-game species; protecting humans, livestock, and pets; and preserving and enhancing the safety of the public during outdoor recreational and livelihood activities. Id. Lest there be any doubt about the primacy of these directives, the Montana legislature required that the specific provisions of Mont. Code Ann. § 87-1-217 "concerning the management of large predators will control the general supervisory authority" of Montana FWP "regarding the management of all wildlife." Id. Thus, by Montana law, wolves must be managed to reduce impacts on ranching and hunting. Similarly, Mont. Code Ann. § 87-3-130 exempts from criminal liability the taking of wildlife, including wolves, when they are "attacking, killing, or threatening to kill a person or livestock." Id. (emphasis added). FWS failed to even consider how these statutory directives preclude proper management of a recovered wolf population.

Once the gray wolf is removed from the ESA's list of threatened and endangered species, Montana FWP is authorized to remove the species from the state list of endangered species. Mont. Code Ann. § 87-5-131(1). Upon removal from the state list, the gray wolf would initially be managed "as a species in need of management." Mont. Code Ann. § 87-5-131. As applied to wolves, "species in need of management" is not defined by Montana law, although "management" is broadly defined to include "the entire range of activities," including "control," "periodic protection of species or populations," and "regulated taking." See Mont. Code Ann. § 87-5-102(5). This broad definition of "management" would allow virtually any management regime—running the gamut from protection or an extermination campaign like that required by law against predatory animals. This discretion is illustrated by the State's treatment of the only other species currently designated as a "species in need of management"—bison—which is met with persistent efforts to reduce its presence in Montana. See Mont. Code Ann. § 87-1-216 (authorizing public hunting and bison management to reduce any threats to "persons or property"). The lack of protective management guidelines under Montana law for "species in need of management" is another basis for rejecting the regulatory mechanisms that would apply in Montana post-delisting.

Moreover, whatever protection might conceivably flow from designation as a "species in need of management" is ephemeral. As soon as Montana FWP and the Montana FWP Commission determine that the wolf no longer needs protection as a "species in need of management," they have the discretionary authority to remove the wolf from that designation and instead list the gray wolf as a "game animal." Mont. Code Ann. § 87-5-131(2). While anyone convicted of unlawfully attempting to trap or hunt a game animal may be subject to fine, Mont. Code Ann. § 87-1-102(c), the FWP Commission has virtually unlimited discretion in determining under what conditions taking of game animals is authorized or prohibited, including the establishment of open seasons and unregulated taking via any means. Thus, Montana law fails to protect gray wolves.

The Montana Plan similarly fails to protect wolves. As an initial matter, the Montana Plan is not a "regulatory mechanism" embodied in statute or regulation. It is a vague, malleable, and largely unenforceable plan. The only provision of the Montana plan that has a binding regulatory effect is the restriction of merely two sections of the Montana predatory animal statutory law discussed above. Even these two provisions are subject to change whenever Montana FWP and the FWP Commission elect to render a new decision or change the wolf plan. Beyond these fundamental deficiencies, the Montana plan fails to make critical decisions to protect wolves and their habitat.

The Montana Plan acknowledges that "FWP and the Commission will establish the regulatory framework to manage wolves." Id. at Ex. Sum., at. x. But neither the FWP nor the Commission have chosen to adopt any wolf regulations. If they did so, they would be empowered by statute to develop whatever provisions they chose to select, irrespective of the broad generalities set forth in the Montana Plan. Under the ESA, FWS cannot consider prospective, unadopted regulations; the statute requires that "existing regulatory mechanisms" be in place to protect wolves prior to delisting. Here, there are no such rules.

The Montana Plan also contemplates a more aggressive approach to killing wolves that might impact cattle and sheep than under the current management regime: "FWP expects the depredation rate under this alternative to be about one half of historical depredation rates." Id. at 135. In order to reach this objective, Montana contemplates liberal reduction of wolf numbers and pack size and killing of "problem" wolves. Id. Given the large number of wolves killed historically in Montana due to perceived conflicts with livestock—especially in 1997-1998 and 2002-2004 when management kills resulting in dramatic wolf population declines—Montana's proposed, more aggressive approach will almost certainly result in significant declines in wolf numbers and distribution from current population levels.

The Montana Plan is further flawed because it fails to commit to maintaining a specific number of wolves in the State. Montana repeatedly states its intention to change the monitoring system from maintaining 10-15 breeding pairs of wolves to using instead a recovery measure of maintaining 10-15 groups of four wolves traveling in winter. See, e.g., Ex. Sum. at xi ("Once FWP becomes more confident that the more general definition is adequate, it will be applied…." (emphasis added); Montana Plan at 94, 132 ("If the more general definition adequately demonstrates reproduction and the security of Montana's gray wolf population….FWP will adopt the more general definition"). This alternate standard would be adopted as the "Montana

wolf population becomes more established"—a vague and entirely discretionary standard. Under the Montana plan, Montana could change the numeric recovery objective for wolves immediately.

In rejecting the Wyoming plan, FWS rightly concluded that Wyoming should not develop demographic recovery targets that were less protective of wolves than the breeding pair metric. This is expressly what Montana intends to do after delisting. The use of four or more wolves traveling together in winter is a lower recovery standard because it does not ensure that the wolf pack: 1) has an alpha male and alpha female pair; 2) has successfully produced pups that year; 3) has secure habit that has allowed at least 2 pups to reach December 31 of their birth year; and 4) has not had the pack dynamics radically disrupted by wolf mortality that threatens pack survival. In addition, if Montana's standard were adopted, Montana could meet its recovery standard by protecting only 40 wolves (10 wolf packs of 4 wolves each)—far less than the standard that FWS contends is necessary for Montana's contribution to recovery of the Northern Rockies DPS.

Along the same lines, the Montana plan asserts that different management actions will be implemented depending on whether or not wolves fall below a threshold of 15 breeding pairs. However, the Montana plan lacks any specifics about different management under either the "lower-than-fifteen" or "fifteen-or-more" packs management scenarios, granting nearly unbridled discretion to FWP in how the wolves will be managed under either situation. The only provisions of the Montana plan that categorically state what different management regimes will be implemented if fewer than 15 breeding pairs exist in Montana are: a) intentional hunting and trapping of gray wolves will be prohibited[6]; and b) livestock producers will not be issued special kill permits for public lands operations. Other than these two provisions, every other management practice would be permitted whether or not fewer than 15 packs exist in Montana, to be decided at the discretion of FWP, with no mandatory standards.

Further, while the Montana plan tracks the statutory language allowing the reclassification of gray wolves to a "species in need of management," and subsequent reclassification as "big game animals" or "furbearer," Ex. Sum. at xii, as a practical matter, these labels have little predictable effect because FWP has not adopted management guidelines for either classification. Thus, at best, the Montana Plan can only be described as a plan to make a plan. See Montana Plan at x ("Implementation also requires FWP to develop and adopt final administrative rules and regulations under the 'species in need of management' designation."); id. at 74 ("The FWP Commission may then approve and adopt the administrative rules and regulations, including any special language pertaining to wolf management or how FWP would interpret relevant state laws."). As described above, Montana law does not require protective management under any of these classifications. Without an implementing regulation that specifies how the wolf will be managed, these promised classifications offer no insight into what protective regulations, if any, will be in place to protect gray wolves in Montana.

[6] Trapping of animals other than wolves within wolf habitat will likely result in adverse—even if unintended—impacts on wolves.

Similarly, the Montana plan notes that wolves may be killed in order to reduce impacts on ungulate populations. Ex. Sum. at xii; Montana Plan at 81. Yet the Plan lacks any explanation of when wolf killing will be implemented and what, if any, restrictions on wolf killing due to alleged impacts on ungulates will be used.

The Montana plan is also inadequate because it lacks a guaranteed source of funding to carry out its provisions. Ex. Sum. at x, xiv; Montana Plan at 14, 82, 138 (all stating that "[i]mplementation of this alternative is contingent on securing adequate funding"). Given this lack of funding, it is unclear what portions of the Montana plan will be implemented, if any, if full funding is not secured. Thus, any projected benefits to wolves under the Montana plan may be purely illusory if funding is not realized. In Montana, this funding problem has occurred before: as the Montana Plan acknowledges, the 1995 Wolf Recovery and Management Plan "was not implemented, primarily because of uncertainties about funding and agency responsibilities." Ex. Sum. at ii. These same flaws afflict the current Montana Plan. Because Montana provides no assurance its plan will ever be implemented, evaluation of the plan's sufficiency—whether by FWS review, peer review, or public review—is impossible.

The Montana plan also includes an unfunded compensation program that Montana has determined is essential to building public support for wolf presence. Id. at 88. The Montana plan states:

> Despite the present uncertainty of how a compensation program would be designed and administered, securing adequate funding for compensation is of equal priority as securing funding to implement the other state and federal agency management activities.

Id. Montana's wolf compensation plan does not currently exist; it provides no basis for a conclusion that adequate regulatory mechanisms are in place to protect wolves post-delisting in Montana.

Finally, the Montana plan calls for future changes to Montana law that have not yet been enacted. Specifically, the Plan states that FWP should "seek state legislation to make the unlawful taking of a gray wolf a misdemeanor under MCA 87-1-102" and to include the wolf within the restitution provisions of Mont. Code Ann. § 87-1-111. Ex. Sum. at xii; Montana Plan at 79, 138. These changes to state law have not been implemented. It is unclear whether FWS deems these statutory changes as part of Montana's regulatory mechanisms or whether Montana's evaluation of the environmental effects of the Montana plan includes these changes. Until they are enacted, however, they cannot qualify as "existing regulatory mechanisms" under the ESA.

The numerous deficiencies in Montana law and the Montana Plan discussed above combine to undermine the conservation benefits to wolves in Montana predicted in the Montana Plan EIS. Until these issues are adequately addressed, Montana's management framework cannot provide the basis for delisting the Northern Rockies gray wolf.

H. Delisting Is Inappropriate Because There Is No Assured Source For Funding Necessary Management Activities.

The delisting proposal explicitly relies on the successful and continued implementation of wolf management, monitoring, and depredation control as the basis for its finding that regulatory mechanisms are sufficient to allow the NRM wolf population to be delisted. 72 Fed. Reg. at 6127 (Montana), 6128 (Idaho). Yet there is no reliable source for funding these activities. Future, unfunded management activities cannot serve as the basis for delisting under the ESA.

The Service cannot rely on uncertain future conservation efforts when determining a species' listing status. See, e.g., Center for Biological Diversity v. Morgenweck, 351 F. Supp. 2d 1137, 1141 (D. Colo. 2004) ("The law is clear that FWS cannot consider future conservation efforts in its review of the Petition.") (citations omitted). Funding is an integral part of future conservation efforts, and the lack of assured funding has been an additional reason for courts to reject listing determinations. See Fed. of Fly Fishers v. Daley, 131 F. Supp. 2d 1158, 1167-68 (N.D. Cal. 2000) (finding reliance on future conservation measures improper where "[o]ther than a budget change proposal, NMFS cited no funding that had been definitively earmarked toward realizing [the state agency's] commitments").

It is highly doubtful that needed wolf management measures will be adequately funded even in the first years post-delisting, let alone in future decades. The delisting proposal incorrectly assumes that states will fund post-delisting management activities. Idaho, for example, is on record as refusing to fund wolf management. See Idaho Plan at 5 ("Because wolves are considered a species of national significance, the plan relies on Federal funding for adoption and implementation."). The State of Montana passed a resolution urging the Department of Fish, Wildlife, and Parks "not to accept wolf delisting unless the terms of delisting are favorable to Montana and include … funding for wolf management from federal sources." H.R.J. Res. 32 (filed Apr. 15, 2003). The State of Oregon made clear in testimony to FWS that it is "seriously under-funded to adequately address future wolf management and depredation issues." Oregon Dep't of Fish and Wildlife, Testimony to USFWS regarding designation of gray wolf DPS and proposal to delist the DPS (March 7, 2007).

Without assured and comprehensive funding for necessary wolf management, regulatory mechanisms to prevent the population's immediate backsliding upon delisting are lacking. The delisting proposal calls for the Northern Rockies gray wolf DPS to be delisted but to remain on hugely expensive life support. Absent assured long-term funding for this chronic maintenance and support, delisting is inappropriate and illegal.

I. FWS Fails to Assess Whether Anti-Wolf County Ordinances that Are Currently Prohibited by the ESA Imperil the Gray Wolf.

Numerous counties within the proposed DPS boundaries have passed resolutions or ordinances declaring wolves an unacceptable or unwanted species, embodying the counties' hostility toward wolves. In Montana, Petroleum County adopted a resolution declaring wolves an "unacceptable species" and another that declares wolves "a threat to public health, safety and livelihood." At least seven other Montana counties (Carbon, Fergus, Wheatland, Petroleum,

Phillips, Valley and Blaine counties) have adopted similar resolutions. Custer County in Idaho passed an ordinance that labels the wolf an unacceptable species. Likewise, we understand that at least five Wyoming counties—Sublette, Park, Fremont, Carbon, and Lincoln—have adopted resolutions hostile to wolves.

Although the delisting proposal assumes that states, rather than local governments, will have control over wolf management post-delisting, counties will gain some control over the fate of wolves within their borders once federal protections are lifted. Montana law, for example, allows counties to "conduct a predatory animal control program" to protect sheep from wolf depredation. Mont. Code Ann. § 81-7-302. Similarly, the Idaho Code gives counties authority to "take all steps that they may deem necessary to control" any "predatory animal" that preys upon livestock. Idaho Code § 25-2601. Wyoming law provides for countywide "predator management districts," whose board of directors primarily consists of sheep, goat, and cattle owners, that are charged with implementing a "predator management program" for the "control of predatory animals and predacious birds that prey upon and destroy livestock, other domestic animals and wildlife." Wyo. Stat. § 11-6-205. Wyoming law defines "predators" to include wolves everywhere outside of the "trophy game" boundary. See Wyo. Stat. § 11-6-302(a)(ix). Wolves are classified as predators within at least part of every Wyoming county that has adopted an "anti-wolf" resolution.

FWS has not examined the full statutory schemes in Montana, Idaho, and Wyoming that provide for predator "control" by counties separate from "management" schemes administered by state wildlife managers. Had FWS done so, it could not have disregarded the significant threat that local hostility poses to wolves' survival post-delisting.

IV. FWS'S CONTINGENCY PLAN TO DELIST ONLY A PORTION OF THE NORTHERN ROCKY MOUNTAINS DPS VIOLATES THE ESA.

The Service's contingency proposal to delist only a portion of the Northern Rocky Mountains DPS if Wyoming fails to adopt an adequate state law and wolf management plan would violate the Endangered Species Act.

A. ESA § 4 Does Not Permit Piecemeal Delisting of a DPS

In the proposed rule, the Service stated that, "[i]n order to finalize this rule as proposed, Wyoming would have to adopt a State law and wolf management plan that would adequately conserve a recovered wolf population into the foreseeable future in the significant portion of range outside the National Parks in northwestern Wyoming." 72 Fed. Reg. at 6117. If Wyoming fails to adopt such a state law and plan, the Service plants to delist the DPS in Idaho, Montana, Washington, Oregon and Utah, as well as the portion of Wyoming that is not deemed a significant portion of the Northern Rocky Mountain wolf's range. See id. However, "[t]he significant portion of the range that exists outside the National Parks within the State of Wyoming would continue to be listed as 'nonessential experimental' based on the biologically significant nature of that portion of the species' range and the continuing unacceptable level of threats that occur under the State's current statute and management plan." Id. The Service thus

proposes to delist only a portion of the Northern Rocky Mountains DPS to address the inadequacy of Wyoming's state law and wolf management plan.

The ESA does not permit this approach to delisting. The ESA provides that the Service may "determine whether any species is an endangered species or a threatened species." 16 U.S.C. § 1533(a). The statute defines a 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." Id. § 1532(16). These ESA provisions authorize listing and delisting decisions at the species, subspecies or DPS levels. However, "[l]isting distinctions below that of subspecies or a DPS of a species are not allowed under the ESA." Alsea Valley Alliance v. Evans, 161 F. Supp. 2d 1154, 1162 (D. Or. 2001) (emphasis added). Here the Service proposes to delist only a portion of the Northern Rocky Mountains DPS and thus violate the ESA.

Indeed, by acknowledging that the portion of Wyoming that would be excluded from delisting constitutes a significant portion of the Northern Rocky Mountains wolf's range, the Service underscores the illegitimacy of its own Wyoming contingency plan. Under the ESA, the Service must determine whether a species is endangered or threatened "throughout all or a significant portion of its range." 16 U.S.C. §§ 1532(6), (20). Here the Service acknowledges that "[c]urrent predatory animal status in Wyoming would jeopardize the GYA significant portion of range and the overall NRM wolf population." 72 Fed. Reg. at 6119. Accordingly, by the Service's own admission, the inadequate Wyoming state law and wolf management plan demonstrate that the Northern Rocky Mountains DPS remains threatened throughout a significant portion of its range. The ESA requires that the DPS remain listed in response to this threat unless and until Wyoming develops a state law and wolf management plan that would satisfy the statutory demand for adequate regulatory mechanisms to conserve the species. See 16 U.S.C. § 1533(a)(1)(D). The ESA does not permit the Service to attempt to deal with this threat by drawing a listing distinction below the DPS level. See Alsea Valley Alliance, 161 F. Supp. 2d at 1162.

The Service's effort to construct a legal justification for this Wyoming contingency proposal is unavailing. The Service attempts to draw support from language in the ESA requiring the Service to publish a list of endangered or threatened species that must "specify with respect to each such species over what portion of its range it is endangered or threatened." 16 U.S.C. § 1533(c)(1) (cited in 72 Fed. Reg. at 6,136). The Service claims this language "indicates that Congress anticipated situations where the protections of the Act might not be extended to an entire species." 72 Fed. Reg. at 6136. However, nothing in this language indicates that Congress sought to allow for such partial listings of a species through any mechanism other than a DPS listing pursuant to ESA § 4(a), 16 U.S.C. § 1533(a). Indeed, the Service's own DPS policy is inconsistent with the agency's new legal argument articulated in the proposed wolf delisting rule. The Service justified its DPS policy on the basis that it would permit conservation measures to focus on smaller-scale wildlife populations than an ESA listing at the species or subspecies level:

> Listing, delisting, or reclassifying distinct vertebrate population segments may allow the Services to protect and conserve species and the ecosystems upon which they depend before large-scale decline occurs that would necessitate listing a

> species or subspecies throughout its entire range. This may allow protection and recovery of declining organisms in a more timely and less costly manner, and on a smaller scale than the more costly and extensive efforts that might be needed to recover an entire species or subspecies.

Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722, 4725 (Feb. 7, 1996). Notably, in contrast to the Service's current contention, in developing the DPS policy, FWS never suggested that such benefits could be achieved through application of ESA § 4(c)(1) or any other statutory authorities outside the DPS provision.

The Service in the proposed wolf delisting rule also seeks to draw support from the Ninth Circuit's decision in Defenders of Wildlife, 258 F.3d at 1144-45, where the court observed that the ESA's reference to the "significant portion" of a species' range granted greater flexibility in wildlife management. However, the Service fails to note that the Ninth Circuit subsequently clarified that the management flexibility identified in the Defenders of Wildlife case is embodied in the policy for designation of a DPS. See National Ass'n of Home Builders v. Norton, 340 F.3d 835, 841 n.7 (9th Cir. 2003). In that same decision, the Ninth Circuit stated that "[t]he ability to designate and list DPSs allows the FWS to provide different levels of protection to different populations of the same species. The FWS does not have to list an entire species as endangered when only one of its populations faces extinction." Id. at 842 (citations omitted). Thus, the Ninth Circuit has firmly grounded the Service's ability to "provide different levels of protection to different populations of the same species" in the DPS provision of the ESA and the Service's implementing policy. See id. The Service's new claim to a broader authority finds no support in Ninth Circuit case law and, as discussed above, defies the Oregon district court's decision in Alsea Valley Alliance.

B. Piecemeal Delisting of the Proposed NRM DPS Is Inconsistent With ESA § 10(j).

The Service further seeks to justify its differential treatment of wolves in northwestern Wyoming, explaining that "the DPS would no longer exist" after wolves in Montana, Idaho, Washington, Oregon, and Utah were reclassified as "not listed," and that the "significant portion of the range that exists outside the National Parks within the State of Wyoming would continue to be listed as "non-essential experimental." Id. This explanation is incoherent. First, species are "listed" under the ESA, not significant portions of range. Second, the designation "non-essential experimental" applies to populations that are reintroduced for purposes of species conservation. Section 10(j) of the Act expressly states that "the term 'experimental population' means any population (including any offspring arising solely therefrom) authorized by the Secretary for release." 16 U.S.C. § 1533(j)(1) (emphasis added). Consistent with this statutory definition, the Service cannot designate the Yellowstone experimental population, Final Rule, 59 Fed. Reg. 60252 (Nov. 22, 1994), and then delist a portion of that population.

Even if it were possible to read the Service's proposal as a bid to designate a new 10(j) population in northwestern Wyoming, it would still violate the ESA. The Service can designate an ESA § 10(j) population only when "the population is wholly separate geographically from

nonexperimental populations of the same species" and the "release will further the conservation of such species." Id. §§ 1533(j)(1),(2). Accordingly, the Service's § 10(j) authorities have no application here: (1) the Service is not proposing any "release"; (2) the proposed "experimental" wolves in northwestern Wyoming are part of the very same Northern Rockies population that would be delisted; and (3) It cannot be argued that experimental wolves are needed to conserve a DPS that has been delisted and "no longer exists." In short, there is a fundamental disconnect between the language and intent of ESA § 10(j) and the Service's characterization of its alternate delisting proposal. The Service cannot reconcile its piecemeal approach to delisting with the ESA's provisions regarding experimental populations.

C. The Service Has Not Offered Any Justification For Its Changed Position Regarding The Legality of Piecemeal Delisting.

The Service, itself, has long recognized that it must delist gray wolves as a species, subspecies, or DPS in keeping with ESA § 4. When wolves were first reintroduced into the Northern Rockies, the agency's § 10(j) rules clearly stated that "[i]n accordance with the Act, delisting may occur when analysis of the best available scientific and commercial data shows that gray wolves are no longer threatened with extinction" due to any of the ESA § 4 factors governing listing and delisting of species. Final Rule, 59 Fed. Reg. 60266, 60272 (Nov. 22, 1994); 59 Fed. Reg. 60252, 60258 (Nov. 22, 1994).

In 2003, when the Service published its rule seeking to reclassify endangered wolves to threatened status, it more explicitly set forth the ESA's statutory requirements related to delisting. See Final Rule, 68 Fed. Reg. 15804, 1,806 (contrasting the use of the term "population" in the DPS context, in which it "is part of the statutory definition of 'species' and is "significant for listing, delisting, and reclassification purposes," and with its more "flexible" use in the 10(j) context), 15825 (affirming that "[d]elisting can occur only when a species (or subspecies or DPS) is recovered," and further stating that "[t]he DPS boundaries must contain the biological grouping and cannot subdivide it) (emphasis added) (Apr. 1, 2003). Notably, in response to comments suggesting a state-by-state delisting approach, the Service stated: "We cannot use a boundary between states to subdivide a single biological population in an effort to artificially create a discrete population." Id. at 15821.

Again, in 2005, when the Service promulgated new § 10(j) rules for states and tribal governments with approved wolf management plans, public comments once again urged that "States with approved management plans should be able to be delisted separately." Final Rule, 70 Fed. Reg. 1286, 1296 (Jan. 6, 2005). In response, the Service stated, "at this time the Act does not allow wolves to be delisted on a State-by-State basis." Id. (emphasis added). The ESA has not been amended since the Service took the unequivocal position that piecemeal delisting based on state plan approvals is illegal. Nevertheless, the Service is now proposing to adopt precisely this approach. The agency has not, and cannot, justify this departure from its longstanding, and correct, interpretation of the ESA's delisting requirements.

In sum, the Service has determined that the inadequate Wyoming state law and wolf management plan create a continuing threat to the Northern Rocky Mountains wolf DPS throughout a significant portion of its range. The consequence under the ESA is that the DPS

must remain listed unless and until that threat is remedied. The ESA does not permit the Service to delist only a portion of the DPS in response to the threat in Wyoming, as the Service now proposes. If the Service persists in the Wyoming contingency strategy set forth in the proposed delisting rule, then the agency will violate the ESA.

CONCLUSION

For the reasons discussed above, the proposal to designate the Northern Rockies gray wolf DPS and to remove the DPS from the list of threatened and endangered species violates the ESA, its implementing regulations, and FWS policies. While wolves have made remarkable recovery progress in the Northern Rockies, now is the time to build on that success, not squander it by allowing states to reduce dramatically wolf distribution and abundance. The Service continues to walk "that fine line between local tolerance and national interest," July 2, 2003 Letter from Ed Bangs to WGFP Director Brent Manning, instead of developing legitimate science-based recovery standards. Because the proposal does not address significant ongoing threats to wolf recovery, we urge FWS not to eliminate federal protections for wolves in the Northern Rockies.

Sincerely,

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Scientific Literature Cited:

Belovsky, G.E. 1987. Extinction models and mammalian persistence. Pages 35-57. *In* M.E. Soulé, ed. 1987. Viable Populations for Conservation. Cambridge University Press, Cambridge, Great Britain.

Berger, J., Stacey, P.B., Bellis, L., Johnson, M.P. 2001. A mammalian predator-prey imbalance: Grizzly bear and wolf extinction affect avian neotropical migrants. Ecological Applications 11: 947-960.

Beschta, R.L., 2003. Cottonwoods, elk, and wolves in the Lamar Valley of Yellowstone National Park. Ecological Applications 13: 1295-1309.

Carroll, C., Phillips, M.K, Lopez-Gonzalez, C.A., Schumaker, N.H. 2006. Defining recovery goals and strategies for endangered species: the wolf as a case study. Bioscience 56:25-37.

Estes, J.A. 1996. The influence of large, mobile predators in aquatic food webs: Examples from sea otters and kelp forests. Pages 65-72 in Greenstreet SPR, Tasker ML, eds. Aquatic Predators and Their Prey. Oxford (United Kingdom): Oxford University Press.

Frankel, O.H. and Soule, M.E. 1981. Conservation and Evolution. Cambridge University Press, New York, NY.

Fuller, T.K. 1989. Population dynamics of wolves in north-central Minnesota. Wildl. Mongr. 105, 41 pp.

Fuller, T.K., W.E. Berg, G.L. Raddle, M.S. Lenarz, G.B. Joselyn. 1992. A history and current estimate of wolf distribution and numbers in Minnesota. Wildlife Society Bulletin 20:42-55.

Goodman, D. 1987. The demography of chance extinction. Pages 11-34. *In* M.E. Soulé, editor, 1987. Viable Populations for Conservation. Cambridge University Press, Cambridge, Great Britain.

Jensen, W.F., T.K. Fuller, and W.L. Robinson. 1986. Wolf (*Canis lupus*) distribution on the Ontario-Michigan border near Sault Ste. Marie. Canadian Field-Naturalist 100:363-366.

Lande, R. 1988. Genetics and demography in biological conservation. Science 241: 1455-1460.

Leonard, J. A., C. Vila, R. K. Wayne. 2005. Legacy lost: genetic variability and population size of extirpated US grey wolves. Molecular Ecology 14: 9-17.

Mech, L. D., S. H. Fritts, G. L. Radde and W. J. Paul. 1988. Wolf distribution and road density in Minnesota. Wildlife Society Bulletin 16: 85-87.

Mech, L. D. 1989. Wolf population survival in an area of high road density. American Midland Naturalist 121: 387-389.

Mladenoff, D. J., T. A. Sickley, A. P. Wydeven, R. G. Haight. 1995. Regional Landscape Analysis and Prediction of Favorable Gray Wolf Habitat and Population Recovery in the Northern Great Lakes Region. Conservation Biology vol. 9(2):279-294.

Mladenoff, D. J., T. A. Sickley, A. P. Wydeven. 1999. Predicting gray wolf landscape recolonization: Logistic regression models vs. new field data. Ecological Applications, 9(1):37-44.

Oakleaf, J.K, et al. 2006. Habitat selection by recolonizing wolves in the Northern Rocky Mountains of the United States. The Journal of Wildlife Management 70(2):554-563.

Power, M.E., Tilman D., Estes, J.A., Menge, B.A., Bond, W.J., Mills, L.S., Daily, G., Castilla J.C., Lubchenco, J., Paine, R.T. 1996. Challenges in the quest for keystones. BioScience 46:609-620.

Primack, R.B. 1993. Essentials of Conservation Biology. Pages 270-276. Sinauer Associates, Inc. Sunderland, Massachusetts.

Reed, D. H, J. J. O'Grady, B. W. Brook, et al. 2003. Estimates of minimum viable population sizes for vertebrates and factors influencing those estimates. Biological Conservation 113: 23-34.

Rooney, Z.P, Wiegman, S.M., Rogers, D.A., Waller, D.M. 2004. Biotic impoverishment and homogenization in unfragmented forest understory communities. Conservation Biology 18: 787-798.

Rowland, M. M., M. J. Wisdom, B. K. Johnson, and M. A. Penninger. 2005. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. Pages 42-52 in Wisdom, M. J., technical editor, The Starkey Project: a synthesis of long-term studies of elk and mule deer. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.

Soule, M.E. 1986. (Ed.) Conservation Biology, the science of scarcity and diversity. Sinauer, Sunderland, MA.

Soule, M.E. and B.A. Wilcox. (Eds.) 1980. Conservation Biology, an evolutionary-ecological perspective. Sinauer, Sunderland, MA.

Soule, M. E. and D. Simberloff. 1986. What do genetics and ecology tell us about the design of nature reserves? Biological Conservation 35: 19-40.

Soule, M.E., Estes, J.A., Miller, B., Honnold, D.L. 2005. Strongly interacting species: Conservation policy, management, and ethics. BioScience 55:168-176.

Thiel, R.P. 1985. Relationship Between Road Density and Wolf Habitat Suitability in Wisconsin. American Midland Naturalist 113:404.

Thomas, C. D. 1990. What do real population dynamics tell us about minimum viable population sizes? Conservation Biology 4: 324-327.

Thurber, J.M., R.O. Peterson, T.D. Drummer, and S.A. Thomasma. 1994. Gray wolf response to refuge boundaries and roads in Alaska. Wildlife Society Buletin 22:61-68.

vonHoldt, B.M., D.R. Stahler, D.W. Smith, D.A. Earl, J.P. Pollinger and R.K. Wayne. In press. The genealogy and genetic viability of reintroduced Yellowstone gray wolves. Molecular Ecology.

Wydeven, A. P., D. J. Mladenoff, T. A. Sickley, B. E. Kohn, R. P. Thiel, J. L. Hansen. 2001. Road Density as a Factor in Habitat Selection by Wolves and Other Carnivores in the Great Lakes Region; Endangered Species Update, Vol. 18, No. 4.