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

WILDEARTH GUARDIANS, a non-profit organization; FRIENDS OF THE BITTERROOT, a non-profit organization; FRIENDS OF THE WILD SWAN, a non-profit organization; the SWAN VIEW COALITION, a non-profit organization, OREGON WILD, a non-profit organization, CASCADIA WILDLANDS, a non-profit organization; the ALLIANCE FOR THE WILD ROCKIES, a non-profit organization; the COTTONWOOD ENVIRONMENTAL LAW CENTER, a non-profit organization; GEORGE WUERTHNER, an individual; the KOOTENAI ENVIRONMENTAL ALLIANCE, a non-profit organization; FOOTLOOSE MONTANA, a non-profit organization; NATIVE ECOSYSTEMS COUNCIL, a non-profit organization; the WILDLANDS NETWORK, a non-profit organization; and	COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

the HELENA HUNTERS AND ANGLERS ASSOCIATION, a non-profit organization,

Plaintiffs,

vs.

SALLY JEWELL, in her official capacity as Secretary of the Interior; and the UNITED STATES DEPARTMENT OF THE INTERIOR, a federal department; DANIEL ASHE, in his official capacity as Director of the U.S. Fish and Wildlife Service; THE U.S. FISH AND WILDLIFE SERVICE, a federal agency,

Federal-Defendants.

INTRODUCTION

1. Plaintiffs, WildEarth Guardians *et al.*, hereby bring this civil action for declaratory and injunctive relief against the above named Federal-Defendants (the U.S. Fish and Wildlife Service or "the Service") pursuant to the citizen suit provision of the Endangered Species Act (ESA), 16 U.S.C. § 1540(g), and the Administrative Procedure Act (APA), 5 U.S.C. § 706, for violations of the ESA.

2. This case challenges the Service's August 13, 2014, decision to withdrawal its proposed rule to list a distinct population segment of the North American wolverine (*Gulo gulo lucus*) occurring in the contiguous United States (hereinafter "wolverine") as a threatened species under the ESA.

3. The best available science reveals only 250-300 wolverines remain in the contiguous United States and the effective population able to breed and contribute to the next generation is dangerously low, likely less than 50. This already small population is threatened by climate change and other human disturbances.

Wolverine are a cold-climate dependent species that rely on sufficient snowpack for denning, foraging, and other benefits. Significant decreases in the amount of available wolverine habitat are anticipated due to increasing temperatures, earlier spring snowmelt, and loss of deep, persistent snowpack from climate change.

4. For these reasons, the Service's own biologists, the Service's Assistant Regional Director for the Mountain-Prairie Region, five out of seven scientists on the peer-review panel, all nine scientific experts convened by the Service to review the wolverine science, the American Society of Mammalogists (ASM), the Society for Conservation Biology (SCB), and fifty-six wildlife ecologists and conservation biologists are in agreement that wolverine qualify for protective status under the ESA.

5. On August 13, 2014, however, the Service did an about-face, chose to ignore the findings and recommendation of its own biologists and the broader scientific community, and published a final decision withdrawing its proposed rule to list wolverine as a threatened species under the ESA (hereinafter "decision not to list wolverine"). No new data, research, peer-reviewed papers, or findings were relied on by the Service in making this decision. Instead, the Service based its decision on a purported lack of "certain predictions," "fine-scale data," and definitive conclusions. Such predictions, data, and conclusions are impractical, nearly impossible to obtain for a rare species harmed by climate change, and not required by the ESA.

6. Wherefore, Plaintiffs – a diverse coalition of conservation, hunting, and animal rights organizations dedicated to ensuring the long-term survival and recovery of wolverine in the contiguous United States and ensuring the Service

bases its listing decisions on sound science – are hereby compelled to bring this civil action for declaratory and injunctive relief.

JURISDICTION AND VENUE

7. This Court has jurisdiction of this action pursuant to 28 U.S.C. § 1331, 16 U.S.C. § 1540(c), and 5 U.S.C. § 704.

8. This Court has the authority to review the Service's action complained of herein, and grant the relief requested, pursuant to the ESA's citizen suit provision, 16 U.S.C. § 1540(g), and the APA, 5 U.S.C. § 706. All requirements for judicial review required by the ESA, including the requirement of providing sixty days notice of intent to sue prior to filing a civil action, are satisfied.

9. The relief sought is authorized by 28 U.S.C. § 2201 (Declaratory Judgment), 28 U.S.C. § 2202 (Injunctive Relief), 16 U.S.C. § 1540 (ESA), and 5 U.S.C. § 706 (APA).

10. Venue is properly before this Court pursuant to 16 U.S.C. § 1540 (g)(3)(A) and 28 U.S.C. § 1391(e).

11. There is a present and actual controversy between the Parties.

PARTIES

12. Plaintiff WILDEARTH GUARDIANS is a non-profit organization dedicated to protecting and restoring the West's wild places, rivers, and wildlife, including wolverine. WildEarth Guardians has over 65,000 members and supporters and offices in Missoula, Montana, Denver, Colorado, and Santa Fe, New Mexico.

13. Plaintiff, FRIENDS OF THE BITTERROOT, is a non-profit organization with over 600 members dedicated to protecting the quality of life and native

wildlife species, including wolverine, in the Bitterroot valley and surrounding National Forests, including the Bitterroot, Beaverhead-Deerlodge, Salmon, and Lolo National Forests. Friends of the Bitterroot is also dedicated to ensuring federal agencies utilize the best available science when making listing decisions under the ESA.

14. Plaintiff, FRIENDS OF THE WILD SWAN, is a non-profit organization with its principal place of business in Swan Lake, Lake County, Montana. Friends of the Wild Swan is dedicated to protecting and restoring water quality and fish and wildlife habitat in northwest Montana and ensuring the long-term survival and recovery of wolverine in the contiguous United States.

15. Plaintiff, the SWAN VIEW COALITION is a Montana non-profit conservation and education organization dedicated to conserving the biological integrity of Montana's natural ecosystems and ensuring projects and programs on public lands truly sustain wildlife habitat and protect water quality. The Swan View Coalition is also dedicated to ensuring the long-term survival and recovery of wolverine in the contiguous United States and ensuring the U.S. Fish and Wildlife Service bases listing decisions on the best available science. The Swan View Coalition is based in Kalispell, Montana.

16. Plaintiff, OREGON WILD is a non-profit corporation with approximately 10,000 members and supporters throughout the state of Oregon and the Pacific Northwest. Oregon Wild and its members are dedicated to protecting and restoring Oregon's wildlands, wildlife (including wolverine), and waters as an enduring legacy.

17. Plaintiff, CASCADIA WILDLANDS is an Oregon non-profit

corporation with approximately 10,000 members and supporters throughout the United States. Cascadia Wildlands educates, agitates, and inspires a movement to protect and restore Cascadia's wild ecosystems.

18. Plaintiff, THE ALLIANCE FOR THE WILD ROCKIES (the Alliance) is a non-profit conservation and education organization with approximately 2,000 members. The mission of the Alliance is to protect and restore the ecological and biological integrity of the Northern Rockies. The Alliance is based in Helena, Montana.

19. Plaintiff, the COTTONWOOD ENVIRONMENTAL LAW CENTER, is a Montana-based nonprofit conservation organization dedicated to the protection of people, forests, water, and wildlife in the West, including the wolverine.

20. Plaintiff GEORGE WUERTHNER is an ecologist, writer (36 publications), and photographer who has viewed wolverines and wolverine tracks in the wild. Mr. Wuerthner currently splits his time between Bend, Oregon and Helena, Montana.

21. Plaintiff, the KOOTENAI ENVIRONMENTAL ALLIANCE, is the oldest non-profit conservation organization in Idaho. Founded in 1972, the Kootenai Environmental Alliance's mission is to conserve, protect and restore the environment with particular emphasis on the Idaho Panhandle and the Coeur d'Alene Basin. The Kootenai Environmental Alliance has over 400 members.

22. Plaintiff, FOOTLOOSE MONTANA is a non-profit organization dedicated to promoting trap free public lands for people, pets, and wildlife, and ensure the long-terms survival and recovery of native wildlife species in Montana, including wolverine. Footloose Montana is based in Missoula, Montana.

23. Plaintiff, NATIVE ECOSYSTEMS COUNCIL is a non-profit advocacy organization based in Three Forks, Montana dedicated to protecting and restoring native ecosystems in the Northern Rockies. In furtherance its this mission, Native Ecosystems Council's members and staff have been active in wildlife management in the Northern Rockies region for more than 16 years.

24. Plaintiff, WILDLANDS NETWORK is a non-profit organization established in 1991 whose mission is to reconnect nature in North America. The Wildlands Network is focused on conserving the wholeness of nature, which requires protecting the biodiversity of species. The Wildlands Network works to provide for large core reserves of habitat and the presence of apex predators and species, including wolverine.

25. Plaintiff, HELENA HUNTERS AND ANGLERS ASSOCIATION, is a non-profit organization dedicated to protecting and restoring fish and native wildlife populations (including wolverine) and habitat in Montana as a public trust, vital to our general welfare. Helena Hunters and Anglers Association promotes the highest standards of ethical conduct and sportsmanship and promotes outdoor recreational opportunities for all citizens to share equally. Helena Hunters and Anglers Association is based in Helena, Montana.

26. Plaintiffs' members, staff, and supporters are dedicated to ensuring the long-term survival and recovery of wolverine in the contiguous United States and ensuring the Service complies with the ESA and bases all listing decisions on the best scientific and commercial data available.

27. Plaintiffs' members and staff live near and/or routinely recreate in occupied wolverine habitat in the contiguous United States. Plaintiffs' members

and staff enjoy observing and studying wolverine in the wild, including signs of the wolverines presence throughout the species' current range. The opportunity to possibly view a wolverine or signs of wolverine in the wild—by itself—is of significant interest and value to Plaintiffs' members and staff and increases their use and enjoyment of public lands.

28. Plaintiffs' members and staff derive aesthetic, recreational, scientific, inspirational, educational, and other benefits from wolverine, recreating in areas occupied by wolverine, and in working to protect and restore wolverine populations, sub-populations, and wolverine habitat (both denning and foraging). In furtherance of these interests, Plaintiffs' members and staff have worked and continue to work to conserve wolverine in the contiguous United States.

29. Plaintiffs' interests have been, are being, and unless the requested relief is granted, will continue to be harmed by the Service's actions and/or inactions challenged in this complaint. If this Court issues the relief requested the harm to Plaintiffs' interests will be alleviated and/or lessened.

30. Defendant SALLY JEWEL is sued in her official capacity as Secretary of the United States Department of the Interior. As Secretary, Ms. Jewell is the federal official with responsibility for all Service officials' inactions and/or actions challenged in this complaint.

31. Defendant UNITED STATES DEPARTMENT OF THE INTERIOR is the federal department responsible for applying and implementing the federal laws and regulations challenged in this complaint.

32. Defendant DANIEL ASHE is sued in his official capacity as Director of the U.S. Fish and Wildlife Service. As Director, Mr. Ashe is the federal official with responsibility for all Service officials' inactions and/or actions challenged in

this complaint.

33. Defendant UNITED STATES FISH AND WILDLIFE SERVICE is an agency within the United States Department of Interior that is responsible for applying and implementing the federal laws and regulations challenged in this complaint.

BACKGROUND

The wolverine

34. The wolverine is the largest member of the *Mustelidae* (weasel) family.

35. The wolverine resemble a small bear, but with a bushy tail and a broad, rounded head, short rounded ears, small eyes, and a body custom-built for high-elevation mountain living.

36. The wolverine's large, crampon-clawed feet (each with five toes with curved, semi-retractile claws used for digging and climbing) are enormous relative to its body which allow the animal to spread its weight like snowshoes. This gives wolverines an advantage over most competitors and prey during cold months.

37. Wolverines operate at a higher metabolic rate than other animals their size.

38. To hold in heat, wolverines wear a double fur coat which includes a dense inner layer of air-trapping wool beneath a cover of stout guard hairs which add extra insulation. These stout guard hairs, which drape from the wolverine, are textured to resist absorbing moisture and excel at shedding frost (this makes a wolverine's pelt extremely desirable and valuable).

39. A wolverine's weapons include well developed claws, sharp front teeth, long fangs, and cheek teeth designed for cutting.

40. The wolverine's bite force is extremely strong. When a wolverine comes upon an elk or moose carcass that larger predators have worked over, it can crunch

up the skeleton left behind, shattering massive bones that not even a grizzly could crack.

41. Wolverines have robust skulls that protect relatively large brains. A wolverine's eyes are positioned in the front of the head rather than on the sides which is a common trait for hunters that rely on accurate depth perception.

42. Reproductive rates for wolverines are among the lowest known for mammals.

43. Approximately 40% of all female wolverines are capable of giving birth at two years old (the average age of reproduction, however, is three years). Female wolverines become pregnant most years and produce a litter of approximately 3.4 kits on average. It is common, however, for females to forgo reproducing every year, possibly saving resources to increase reproductive success in subsequent years. Female wolverines are also known to reabsorb or spontaneously abort litters prior to giving birth. Breeding generally occurs from late spring to early fall. Female wolverines undergo delayed implantation until the following winter to spring, when active gestation lasts from 30 to 40 days.

44. Wolverine litters are born from mid-February through March.

45. Female wolverines use natal (birthing) dens that are excavated in snow.

46. Deep snow that persists into the late spring is needed for wolverine reproduction.

47. No records exist of wolverines denning anywhere but in snow in the contiguous United States. Wolverines do not den in the absence of snow. This is true even though there is a wide availability of snow-free denning opportunities within the species' geographic range.

48. Stable snow pack greater than five feet deep appears to be a requirement for natal denning because it provides security for offspring and buffers cold winter temperatures.

49. The wolverine's natal den consist of tunnels that contain well-used runways and bed sites and may naturally incorporate shrubs, rocks, and downed logs as part of their structure. The snow tunnel and complex structures associated with dens is likely required to protect young from interspecific and intraspecific predation. A layer of deep snow may also add crucial insulation from cold temperatures and wind prevalent in denning habitat.

50. Female wolverines have been known to abandon reproductive dens when temperatures warm and snow conditions become wet. This may indicate that the condition of the snow is important to successful reproduction and that the onset of spring snowmelt may force female wolverines to move kits into alternate denning sites with better snow conditions if they are available.

51. In Montana, natal dens typically occur above 7,874 feet and are located on north aspects in avalanche debris, typically in alpine habitats near treeline.

52. Once the litter is born, wolverines will continue to use the natal den through late April and early May (occupancy of such dens varies from 9 to 65 days). As wolverines grow, females move the kits to multiple secondary "maternal" dens. Researchers think the timing of natal den abandonment may be tied to the accumulation of water in the dens due to snowmelt, the maturation of offspring, disturbance, and/or geographic location.

53. After using natal and maternal dens, wolverines may also use rendezvous sites through early July. These sites are characterized by natural (unexcavated) cavities formed by large boulders, downed logs (avalanche debris), and snow.

54. Wolverines do not appear to specialize on specific vegetation or geological habitat aspects. Instead, wolverines select areas that are cold and receive enough winter precipitation to reliably maintain deep persistent snow late into the warm season.

55. Wolverines are morphologically, demographically, and behaviorally

adapted to cold environments with low productivity and where snow is present much of the year. This niche results in inherently vulnerable populations due to low densities and limited capacity for growth.

56. Wolverines opportunistically feed on a variety of food sources. Wolverines scavenge carcasses, prey upon small animals, birds, and ungulates, and eat fruit, berries and insects.

57. Wolverines cache food in snow banks and in boulder fields with icy water running underneath. Supplies in such caches may keep not just for one month but from one year to the next. Wolverines also have an excellent sense of smell that enables them to find food beneath deep snow. During all seasons and regions, caching food in cold, structured microsites inhibits competition with insects, bacteria, and other scavengers. Caching is likely a critical behavioral adaptation because total food resources are relatively limited within the wolverine's niche.

58. Wolverines require secure, core areas of habitat that are large and linked to other sub-populations. Wolverines require a lot of space; the availability and distribution of food is likely the primary factor in determining wolverine movements and home range size.

59. Female wolverines forage close to den sites in early summer, progressively ranging further from dens as kits become more independent.

60. Wolverines travel long distances over rough terrain and deep snow, and adult males generally cover greater distances than females. Wolverines' territories in Montana, for example, range from 193 to 588 square miles for males and 55 to 148 square miles for females. Wolverines often move long distances in short periods of time when dispersing from natal ranges, into habitats unsuitable for long-term survival. Such movements make it difficult to estimate total population size and distinguish between occurrence records that represent established populations and those that represent short-term occupancy or exploratory

movements.

61. In the contiguous United States, wolverines exist as a metapopulation. A metapopulation is a network of semi-isolated populations, each occupying a suitable patch of habitat in a landscape of otherwise unsuitable habitat. Metapopulations require some level of regular or intermittent migration and gene flow among subpopulations, in which individual populations support one another by providing genetic and demographic enrichment through mutual exchange of individuals. Individual subpopulations may go extinct or lose genetic viability, but are then rescued by immigration from other subpopulations, thus ensuring the persistence of the metapopulation as a whole.

62. In the contiguous United States, wolverine historically occurred throughout the Southern Rockies (Wyoming, Colorado, and northern New Mexico), California's Sierra Nevada Mountains, parts of the Pacific Northwest (Oregon and Washington), throughout the Northern Rockies (Montana, Idaho, and Wyoming), and Utah. Records of wolverine occurrences also exist in parts of the Great Plains, Great Lakes, Midwest, and Northeastern United States.

63. Currently, known functioning populations of wolverines in the contiguous United States are limited to Washington's North Cascades, the Wallowa Range in Oregon, and the Northern Rocky Mountains in Idaho, Montana, and Wyoming.

64. Modeled wolverine habitat currently exists in portions of Washington, Oregon, California, Idaho, Montana, Wyoming, Colorado, Nevada, Utah, and northern New Mexico.

65. The majority (95%) of wolverine habitat currently occupied by the species in the contiguous lower 48 states is federally owned and managed mostly by the United States Forest Service.

Threats to the wolverine.

66. Wolverine are threatened by an already small population size with low genetic diversity, loss and modification of habitat from climate change, mortality from trapping, other human disturbances, and the inadequacy of existing regulatory mechanisms.

Small population size and low genetic diversity

67. No systematic or accurate population census of wolverines in the contiguous United States exists so the current population level (total and effective) and population trends remain unknown.

68. Based on the Service's current knowledge of occupied wolverine habitat and wolverine densities, the Agency estimates the total wolverine population in the entire contiguous United States to be approximately 250-300 individuals, with the majority of individuals in Montana, Idaho, and Wyoming. The Service's population estimate (by state) is as follows: 175 in Montana; 75 in Idaho; 15 in Wyoming; 1 in Colorado; 10 in Washington; 5 in Oregon; and 1 in California.

69. The Service's population estimate is not based on a peer-reviewed paper or study estimating the total population of wolverine in the contiguous United States. The Service's 250-300 number is derived primarily from the amount of modeled wolverine habitat that exists in the contiguous United States (in the absence of field surveys) which, according to the best available science, is not the most reliable or appropriate method for predicting wolverine numbers. Peer-reviewed expressly warn against estimating wolverine abundance based on available habitat assumed densities, without actual field surveys. The total wolverine population in the contiguous United States could be less than 200 individuals.

70. The Service estimates that approximately 175 wolverines occupy Montana. Other wolverine researchers say a more realistic estimate of the number

of wolverines in Montana is likely 100 to 150 individuals.

71. Biologists draw a distinction between a species' total or absolute population size and the "effective" size of a population, which is the number of individuals that actually contribute offspring to the next generation. To determine the effective population size, biologists take the overall count, subtract nonbreeding animals (immature, infertile, or prevented from mating by dominant individuals), then subtract the adult females that skipped breeding that year because they were nursing young or replenishing their energy reserves. Then subtract the mothers whose offspring of that year failed to survive to breeding age. Effective population size is important because it determines rates of loss of genetic variation and the rate of inbreeding.

72. The estimated effective population of wolverine in Montana, Idaho, and Wyoming is 35 individuals. The estimated effective population of wolverine in the entire contiguous United States is less than 50.

73. The Service notes that the effective population size of wolverines in the contiguous United States is exceptionally low and below what is thought to be adequate for short-term maintenance of genetic diversity and population viability.

74. Concern over low effective population size was highlighted in a peer-reviewed study which determined that without immigration from other populations at least 400 breeding pairs of wolverines would be necessary to sustain the long-term genetic viability of the contiguous United States population.

Loss and modification of habitat from climate change

75. The best available science reveals climate change will decrease the amount of available wolverine habitat and increase fragmentation between areas of suitable wolverine habitat in the contiguous United States. This will result in a smaller and more isolated population of wolverines in contiguous United States.

76. The wolverines' reliance on late spring snow for denning and consistent

snowpack and cold sites for food storage, as well as evidence revealing the species rarely occurs where the average maximum daily temperature in August exceeds 70 degrees, makes the species sensitive to climate change.

77. Peer-reviewed, climate change models predict that warming temperatures and changes in precipitation will result in reduced snowpack and permanent loss of wolverine habitat in the contiguous United States.

78. By 2045, the best available science estimates that 23 percent of current wolverine habitat in the contiguous United States will be lost due to climate warming. That loss expands to 63 percent of wolverine habitat by the time interval between 2070 and 2099.

79. The best available science reveals changes in climate are likely to result in permanent loss of a significant portion of wolverine habitat within the foreseeable future. Given the spatial needs of wolverines and the limited availability of suitable habitat, this projected loss of wolverine habitat will likely result in a loss of wolverine numbers that is greater than the overall loss of habitat area.

80. The best available science reveals that as habitat patches become smaller and more isolated, they are likely to lose the ability to support wolverines. Loss of wolverine habitat also increases habitat fragmentation as islands of wolverine habitat become smaller and intervening areas between wolverine habitat become larger. This habitat alteration will result in the loss of genetic diversity due to inbreeding within a few generations. Further, isolation of wolverines on small habitat islands with reduced connectivity to other populations would also increase the likelihood of sub-populations being lost due to demographic stochasticity, impairing the functionality of the wolverine metapopulation in the contiguous United States.

81. The best available science reveals climate change will have direct and

indirect effects to wolverine populations in the contiguous United States including reducing the number of wolverines that can be supported by the available habitat and reducing the ability of wolverines to travel between patches of suitable habitat. This reduction in connectivity is likely to affect metapopulation dynamics making it more difficult for subpopulations to recolonize areas where wolverines have been extirpated and to bolster the genetics or demographics of adjacent subpopulations.

Mortality from trapping

82. Over the last hundred years, trapping has been the primary cause of wolverine mortality in the contiguous United States. Trapping is believed to have played a role in the historic decline of wolverines in North America in the late 1800s and early 1900s.

83. Trapping is the driving force behind local extirpations of wolverine populations in the contiguous United States. Trapping accounts for a high proportion of wolverine mortality, affecting even populations that are locally protected.

84. Wolverines are vulnerable to trapping due to their habit of ranging widely in search of carrion, which would bring them into frequent contact with poison baits and traps set for other species. Montana authorizes the trapping of wolverines and trapping for other species in occupied wolverine habitat. Other states within the wolverine's range in the contiguous United States authorize trapping for other species within occupied wolverine habitat.

85. Because of their scavenging nature, wolverines come readily to man-made baits and are thus vulnerable to skilled trappers. Females with newborn young are limited in their ranging and foraging capacities and, as such, are especially vulnerable to baited traps.

86. The best available science reveals that human caused mortality of wolverine from trapping can harm local populations of wolverine in a number of

ways. According to the Service, human caused mortality is likely additive to natural mortality due to the low reproductive rate and relatively long life expectancy of wolverines. Trapped wolverine populations likely live at densities that are lower than carrying capacity, and may need to be reinforced by recruits from untrapped populations to maintain population viability and persistence.

87. Wolverines are susceptible to trapping due to reduced levels of gene flow, low reproductive rates and need for large areas of undisturbed habitat.

88. According to Forest Service biologists, no other type of human activity has the same potential to cause populations to become dangerously small or locally extirpated as trapping. According to Forest Service biologists, decisions concerning wolverine trapping are critical to the persistence of extant populations and to the recolonization of depleted populations, especially those in isolated mountain ranges.

89. The Service found that trapping wolverines could have "significant negative effects" on wolverine populations inhabiting small mountain ranges.

Other human disturbances

90. Other human disturbances that adversely impact wolverine in the contiguous United States include roads, rural sprawl and development (in important travel corridors or linkage zone), timber management on National Forest lands, and winter recreation.

91. The best available science reveals that winter recreational activities have the potential to disrupt and limit the use of wolverine natal denning areas.

92. The best available science reveals some concern regarding the effects of winter recreation in areas favored by females for reproductive denning. Preliminary data analyses suggest wolverine may respond to winter recreation by changing the behavior of denning females and causing significant additive energetic effects on wolverines.

Inadequacy of existing regulatory mechanisms

93. None of the existing Federal or State regulatory mechanisms in place are designed to address the threat of modification of wolverine habitat due to the loss of snowpack from climate change.

94. Approximately 94% of the currently occupied wolverine habitat in the contiguous United States is in Federal ownership, with the vast majority on National Forest lands. Land and Resource Management Plans Forest that dictate the management of these lands rarely mention wolverine and do not include specific goals, objectives, or standards for properly managing the species.

The Service's determination that wolverine warrant protection under the ESA.

95. On December 14, 2010, the Service determined that the addition of wolverines to the ESA's list of threatened and endangered wildlife was warranted. The Service's warranted decision was based on the best scientific and commercial information available, consideration of the ESA's five factors in assessing whether wolverines warrant listing, and made in accordance with Section 4 of the ESA, 16 U.S.C. § 1533, and the ESA's implementing regulations, 50 C.F.R. § 424.

96. In the Service's December 14, 2010, warranted finding, the Agency found that wolverines "inhabit habitats with near-arctic conditions wherever they occur" and that, in the contiguous United States, wolverine habitat is restricted to high-elevation areas in the West. The Service also determined that wolverines are dependent on deep persistent snow cover for successful denning and they concentrate their year round activities in areas that maintain deep snow into the spring and cool temperatures throughout the summer.

97. In the Service's December 14, 2010, warranted finding, the Agency recognizes that empirical proof that a threat to wolverines exists is not required for

listing under the ESA. The Service explains that the combination of exposure and some corroborating evidence of how the species is likely impacted suffices under the ESA.

98. The Service arrived at a "warranted" for listing determination for wolverine due to the current status of wolverines in the contiguous United States, which the Service noted exists as a small (250-300 individuals) and generally depauperate (3 of 13 haplotypes) metapopulation with limited dispersal between subpopulations. This information, when combined with information about the primary threat of climate change and secondary threats indicated that wolverines are likely to lose 63 percent of their current habitat area over the next century.

99. In the Service's December 14, 2010, warranted finding, the Agency determined that climate changes are predicted to reduce wolverine habitat and range by 23 percent over the next 30 years and 63 percent over the next 75 years, rendering remaining wolverine habitat significantly smaller and more fragmented.

The Service's proposed rule to list the wolverine.

100. On February 4, 2013, the Service published notice of a proposed rule to list wolverine as a threatened species under the ESA (78 Fed. Reg. 7864). The Service determined that habitat loss due to increasing temperatures and reduced late spring snowpack due to climate change is likely to have a significant negative population-level impact on wolverine populations in the contiguous United States. The Service determined that in the foreseeable future, wolverine habitat is likely to be reduced to the point that the wolverine in the contiguous United States is in danger of extinction.

101. The Service's February 4, 2013,proposed rule to list wolverine was based on the best scientific and commercial data available.

102. In the February 4, 2013, proposed rule to list wolverine, the Service found that deep, persistent, and reliable spring snow cover is the best overall predicator of wolverine occurrence in the contiguous United States. The Service found that deep, persistent snow correlates well with wolverine year-round habitat use across wolverine distribution in North America at both regional and local scales. The Service states that while they are uncertain why spring snow cover so accurately predicts wolverine habitat use, it is likely related to wolverines' need for deep snow during the denning period and wolverines' use of a cold, low productivity niche by using food caching in cold habitats to survive food-scare winters that other carnivores cannot.

103. In the February 4, 2013, proposed rule to list wolverine, the Service recognized that there are always "scientific uncertainties" on may aspects of climate change, including the role of natural variability in climate. The Service stated that to date, McKelvey et al. (2011) is "the most sophisticated analysis regarding climate change effects to wolverines" and "represents the best scientific information available regarding the impacts of climate change to wolverine habitat."

104. In the February 4, 2013, proposed rule to list wolverine, the Service found that McKelvey et al. (2011) was the best available science on projecting the future impacts of climate change on wolverine habitat for four reasons: (1) the habitat projections were based on global climate models that are thought to be the most reliable predicators of future climate available; (2) they conducted downscaling analyses to infer geographic climate variation at the scale relevant to wolverine habitat; (3) they used a hydrologic model to predict snow coverage during the spring denning period; and (4) they used the habitat model developed by Copeland et al (2010) to relate projected climate changes to wolverine habitat.

105. In the February 4, 2013, proposed rule to list wolverine, the Service

recognized that, when working in concert with climate-change, low population numbers and human cause mortality from trapping pose a threat to wolverine in the contiguous United States.

106. In the February 4, 2013, proposed rule to list wolverine, the Service states that other factors and threats may, when considered in the context of climate change, become threats due to the cumulative effects they have on wolverine populations.

The peer review panel.

107. The Service asked a group of seven experts to review the science behind the Service's proposed rule to list the wolverine. Five of the seven reviewers supported the conclusion that the proposed listing decision was both logical and supported by the best available science.

108. Dr. John Squires found that the Service's February 4, 2013, proposed rule to list wolverine "provided a logical and transparent rational for the proposed listing" that was supported "with a clear presentation of the most relevant literature."

109. Dr. Michael Schwartz found the Service's February 4, 2013, proposed rule to be "logical and informative" and "an excellent piece of work."

110. William Zielinski, Research Ecologist with the Forest Service's Pacific Southwest Research Station found the Service's February 4, 2013, proposed rule to be logical and, in particular, found "the evidence for the effects of climate change on wolverine winter (and summer) habitat" and the "fact that the additional threats of trapping (managed and incidental) and small population size may add cumulative weight to the overarching threat of climate change" to be "strong."

111. Jeff Copeland, one of the leading wolverine biologists at the U.S. Forest Service's Rocky Mountain Research Station in Montana, reviewed the Service's proposed listing rule and supported the Service's finding that wolverine warranted

listing under the ESA.

112. Keith Aubry, a Research Wildlife Biologist with the Forest Service's Pacific Northwest Research Station, reviewed the Service's February 4, 2013, proposed rule to list wolverines and found it to be "logical and supported by the evidence." He found the Service's findings to be "careful, thoughtful, and scientifically defensible."

113. Two of the seven peer reviewers – Dr. Audrey Magoun and Bob Inman – disagreed with the Service's findings in the February 4, 2013, proposed rule to list wolverines.

The independent science panel convened by the Service.

114. On April 3-4, 2014, the Service and partners from state wildlife agencies convened a panel of nine experts in climate change, wolverines and other mammalian carnivores, habitat modelers, and population ecologists to discuss climate-related issues and possible future population trends for wolverines. The objective of the panel of nine experts was to better understand the strength of the relationships between climate change, wolverine habitat, and future wolverine population trends through dialogue.

115. The nine panelists concluded unanimously that the scientific conclusions in the proposed listing rule regarding the threats to the species from climate change were well supported.

116. The nine panelists agreed on the importance of deep snow for wolverines at the denning scale, including that patches of deep snow are important for refrigeration of food caches and thermal protection for kits and contiguous deep snow may be important as a barrier for other mammalian carnivores. Most of the panelists also agreed that McKelvey et al. (2011)'s snow cover projections are "about right" in the short term but underestimated the severity of snow loss in the long term. The panelists also believed that the impacts of climate change on

wolverine habitat may be greater than or less than the projections in McKelvey et al. (2011) but concluded there was no indication that McKelvey et al. (2011) showed systematic error resulting in a one-sided bias.

117. Nine out of nine panelists expressed pessimism for the long-term (roughly end of the century) future of wolverines in the contiguous United States because of the effects of climate change on habitat.

The Assistant Regional Director's memo

118. In May, 2014, the Service's Assistant Regional Director, Ecological Services, for the Mountain-Prairie Region, Theresa Rabot, drafted a memorandum summarizing the conclusions of the Service's scientists in the Montana field office who had worked on the listing determination for wolverine.

119. The Assistant Regional Director's memorandum reaffirms the Service's findings in the Service's February 4, 2013, proposed rule. The Assistant Regional Director concluded that "relying on Copeland et al. (2010) and McKelvey et al. (2011) as the best available scientific information regarding the effects of climate change on wolverine habitat remains scientifically justified."

120. The Assistant Regional Director's memorandum states that in the Service's review, it has been "unable to obtain or evaluate any other peer reviewed literature or other bodies of evidence that would lead us to a different conclusion. While we recognize there is uncertainty associated with when population effects may manifest themselves, any conclusion that there will not be population effects appears to be based on opinion and speculation. In our opinion that would not represent the best available scientific and commercial data available."

Review and input on the proposed listing rule from other scientists.

121. On July 31, 2014, the American Society of Mammalogists (ASM) and the Society for Conservation Biology (SCB) sent the Service a letter supporting the listing of wolverine under the ESA. The ASM and SCB believe that the best

available science on wolverine and threats to the species supports listing.

122. The ASM and SCB offered to assist the Service with additional external review of the relevant wolverine and climate science, if necessary.

123. On July 31,2014, fifty-six wildlife ecologists and conservation biologists sent a letter to the Service supporting the listing of wolverine and stating that the February 4, 2013, proposed rule was based on the best available science, including numerous peer-reviewed scientific studies demonstrating the wolverine's dependence of snowpack and studies projecting the continued and extensive loss of snowpack across the wolverine's range due to climate change.

The Service's about-face decision to withdraw its proposed rule to list wolverine.

124. On August 13, 2014, the Service issued a final decision withdrawing its proposed rule to list wolverine as a threatened species under the ESA. The Service based this decision on its new conclusion that the factors affecting the wolverine identified in the February 4, 2013, proposed rule "are not as significant as believed at the time of the proposed rule's publication.

125. In the Service's August 13, 2014, decision not to list wolverine, the Service states that McKelvey et al. (2013) is the "most sophisticated analysis of impacts of climate change at a scale specific to the range of the wolverine."

126. In the Service's August 13, 2014, decision not to list wolverine, the Service says it re-evaluated the best scientific data available and reaching its conclusion that climate change will not result in significant reductions in wolverine habitat in the foreseeable future. The Service's decision not to list wolverine was not based on any new data, research, or peer reviewed papers that emerged after publication of the proposed rule to list wolverine on February 4, 2013.

127. In the Service's August 13, 2014, decision not to list wolverine, it acknowledges that there is significant evidence that the climate within the range of wolverine is warming and will affect snow patterns and associated wolverine

habitat. The Service maintains that wolverine's response to such changes, however, is too uncertain to warrant listing because it does not know how the effects of climate change will "precisely" impact wolverine populations.

128. The ESA, the Service's implementing regulations, and the Service's policy documents do not require "experimental evidence" and does not preclude the use of predictive modeling approaches that are supported by the scientific literature. The National Research Council (NRC) recommends, in its reported entitled "Science and the Endangered Species Act," greater use of predictive modeling techniques such as population viability analysis in ESA decision making.

129. The Service's August 13, 2014, decision not to list wolverine ignores the predictive modeling approaches used to project future effects of climate change on snow cover and the loss of habitat components for wolverine.

130. The Service based its August 13, 2014, decision not to list wolverine on the finding that wolverines are believed to be "expanding both within the area currently inhabited by wolverines as well as into suitable habitat not currently occupied and/or occupied by a few individuals."

131. The Service based its August 13, 2014, decision not to list wolverine on the finding that sufficient habitat for wolverine will likely remain to maintain the wolverine population at the current level of abundance even if climate change reduces snowpack.

132. The Service based its August 13, 2014, decision not to list wolverine on the finding that "den sites are not currently limiting wolverines" and there is not "sufficient information to predict if and when any limitation will occur in the future." The Service also concluded that "support for the obligate relationship between wolverine and deep snow at an individual wolverine's home range" or the wolverines range in general "is lacking." The Service states it does not have "sufficient information to suggest that deep snow is required by wolverines through

their home ranges" beyond the level of the individual den site.

133. The Service based its August 13, 2014, decision not to list wolverine on the finding that it does not have "sufficient information" to understand the "specific response" of wolverine to future effects of changes in climate. The Service determined that "no data" reliably suggests that the anticipated changes are such that the viability of wolverine populations in the contiguous United States will be at risk.

134. In the Service's August 13, 2014, decision not to list wolverine, the Service maintains the best available science does not indicate that human disturbance from winter recreational activities, land development, transportation corridors, and timber management pose a threat to wolverine in the contiguous United States.

135. In the Service's August 13, 2014, decision not to list wolverine, the Service maintains the best available science does not indicate that mortality from trapping (including incidental trapping) poses a threat to wolverine in the contiguous United States.

136. In the Service's August 13, 2014, decision not to list wolverine, the Service concluded that demographic stochasticity and loss of genetic diversity due to small population and effective population size is not a threat to wolverine in the contiguous United States.

137. In the Service's August 13, 2014, decision not to list wolverine, the Service concluded that the combination of climate change, human disturbances, mortality from trapping, and small population and effective population size does not pose a cumulative threat to wolverine in the contiguous United States.

138. The Service's August 13, 2014, determination that wolverine do not warrant listing under the ESA conflicts with the recommendations of the Service's Montana Ecological Services Office in Helena, Montana, the recommendation from

the Assistant Regional Director, Ecological Services for the Mountain-Prairie Region, the findings of five of the seven members of the peer review panel, the findings of the April, 2014, scientific panel, the peer-reviewed papers from Forest Service's the Rocky Mountain Research station, and the recommendations of the ASM, SCB, and the fifty six wildlife ecologists and conservation biologists who signed the July 31, 2014, letter to the Service.

COUNT I
ESA VIOLATION
(failure to utilize the best available science)

139. Plaintiffs incorporate by reference all preceding paragraphs.

140. Pursuant to Section 4(b)(1)(A) of the ESA, 16 U.S.C. § 1533(b)(1)(A), the Service's implementing regulations, and the Service's 2011 policy on scientific integrity, the Service must make all listing decisions "solely on the basis of the best scientific and commercial data available. . ." (hereinafter "best available science").

141. The Service's August 13, 2014, decision not to list wolverine was not based on the best available science on wolverine and threats to wolverine.

142. The Service's failure and/or refusal to utilize the best available science when deciding not to list wolverine violates of Section 4 of the ESA, 16 U.S.C. § 1533, and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law " and/or constitutes "agency action unlawfully withheld or unreasonably delayed." 5 U.S.C. §§ 706 (2)(A), 706 (1).

COUNT II
ESA VIOLATION
(failure to properly apply the five listing factors)

143. Plaintiffs incorporate by reference all preceding paragraphs.

144. Pursuant to Section 4(a)(1) of the ESA, 16 U.S.C. § 1533(a)(1), and the Service's implementing regulations, Service is required to determine whether a

species is threatened or endangered because of any of the following factors: (A) the present or threatened destruction, modification, or curtailment of the species' range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other man-made factors affecting the species' continued existence. These factors are listed in the disjunctive so any one or combination of them can be sufficient for a finding that a species qualifies as threatened or endangered.

145. In deciding not to list wolverine, the Service failed to carefully consider and adequately apply Section 4(a)(1)'s five listing factors in accordance with the ESA and the Service's implementing regulations. The Service failed to analyze whether each factor, individually, or a combination of the various factors together (the cumulative impact), qualify wolverine for listing as a threatened or endangered species.

146. The Service's failure and/or refusal to properly consider and apply Section 4(a)(1)'s five listing factors in deciding not to list the wolverines violates Section 4 of the ESA, 16 U.S.C. § 1533, and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law " and/or constitutes "agency action unlawfully withheld or unreasonably delayed." 5 U.S.C. §§ 706 (2)(A), 706 (1).

COUNT III
ESA VIOLATION
(misapplication of the ESA's terms)

147. Plaintiffs incorporate by reference all preceding paragraphs.

148. Pursuant to Section 4 of the ESA, 16 U.S.C § 1333, the Service must base all listing decisions solely on the basis of the "best available science." The term "best available science" does not mean the best "possible" science and does not require certain science, definitive conclusions, scientific census, or even data

on all aspects of a species' biology.

149. Pursuant to the ESA, a species is "threatened" if it 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). The term "likely to become" means something less than 100% certainty. A 51% chance (more likely than not) suffices. The term "foreseeable future" extends so far as reasonably "reliable" predictions can be made. Reliable predictions are not certain predictions. Predictions are reliable if they provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the ESA. The phrase "significant portion of its range" means, among other things, a major geographical area in which the species is no longer viable but once was. The task of defining the phrase includes quantifying of the species' historic range and an evaluation of whether the lost habitat amounts to a "significant portion" of that range.

150. Pursuant to the ESA, a species is "endangered" if it is "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). The term "in danger of extinction" does not mean or require a high risk of extinction.

151. In deciding not to list wolverine, the Service failed to properly define and apply the ESA's statutory terms and phrases. The Service failed to properly define and apply the "best available science," "threatened," and "endangered" and the terms and phrases included therein, including "likely to become," "foreseeable future," "in danger of extinction," and "a significant portion of its range."

152. The Service's failure and/or refusal to properly define and apply the ESA's statutory terms and phrases in deciding not to list the wolverines violates the

ESA and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law " and/or constitutes "agency action unlawfully withheld or unreasonably delayed." 5 U.S.C. §§ 706 (2)(A), 706 (1).

153. The Service's failure and/or refusal to properly define and apply the phrase "significant portion of its range" in its July 1, 2014, Final Policy (79 Fed. Reg. 37577) also violates the ESA and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law " and/or constitutes "agency action unlawfully withheld or unreasonably delayed." 5 U.S.C. §§ 706 (2)(A), 706 (1).

COUNT IV
ESA and APA VIOLATION
(insufficient data and no rational connection between facts and decision)

154. Plaintiffs incorporate by reference all preceding paragraphs.

155. Pursuant to the ESA and APA, 5 U.S.C. § 706, the Service's listing decision on wolverine must be supported by reliable and sufficient evidence and there must be a rational connection between the facts found and the decision made.

156. The Service's decision not to list wolverine is not supported by reliable and sufficient evidence, is premised on contorted and manipulated data, and there is no rational connection between the evidence in the record, including the peer-reviewed studies on wolverine and threats to the species, and the Service's decision not to list the species. The Service's decision not to list wolverine therefore violates the ESA and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law " and/or constitutes "agency action unlawfully withheld or unreasonably delayed." 5 U.S.C. §§ 706 (2)(A), 706 (1).

REQUEST FOR RELIEF

157. Plaintiffs incorporate by reference all preceding paragraphs.

158. WHEREFORE, Plaintiffs respectfully request that this Court grant the following relief:

A. Issue a declaratory judgment that the Service's August 13, 2014, decision not to list wolverine violated the ESA and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" and/or constitutes "agency action unlawfully withheld or unreasonably delayed" under the APA;

B. Issue an order setting aside the Service's August 13, 2014, decision not to list wolverine and remanding this matter back to the Service for further analysis and action consistent with the ESA and this Court's memorandum opinion and order;

C. Issue an order reinstating the wolverine's status as a candidate species, in accordance with the Service's February 4, 2014, proposed rule, (78 Fed. Reg. 7864) pending a new listing decision;

D. Issue a declaratory judgment that the Service's July 1, 2014, Final Policy (79 Fed. Reg. 37577) defining "significant portion of its range" violates the ESA and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" under the APA;

E. Issue an order vacating or setting aside the Service's July 1, 2014, Final Policy (79 Fed. Reg. 37577) defining "significant portion of its range.".

F. Retain continuing jurisdiction of this matter until the Service fully remedies the violations of law complained of herein;

G. Issue such injunctive relief as Plaintiffs may subsequently request;

H. Grant Plaintiffs their costs and expenses of litigation, including reasonable attorneys' fees pursuant to 16 U.S.C. § 1540(g);

I. Grant such other relief that this Court deems necessary, just, and proper.

Respectfully submitted this 20th day of October, 2014.

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