Matthew K. Bishop (Mont. Bar No. 9968)
Western Environmental Law Center
103 Reeder's Alley
Helena, Montana 59601
Ph: (406)-324-8011
bishop@westernlaw.org

John R. Mellgren, *application for pro hac vice pending*
Western Environmental Law Center
120 Shelton McMurphey Blvd., Ste. 340
Eugene, OR 97401
Ph: (541) 359-0990
mellgren@westernlaw.org

Counsel for Plaintiffs

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; SWAN VIEW COALITION, a non-profit organization; OREGON WILD, a non-profit organization; CASCADIA WILDLANDS, a non-profit organization; ALLIANCE FOR THE WILD ROCKIES, a non-profit organization; COTTONWOOD ENVIRONMENTAL LAW CENTER, a non-profit organization; GEORGE WUERTHNER, an individual; FOOTLOOSE MONTANA, a non-	No. COMPLAINT

profit organization; NATIVE ECOSYSTEMS COUNCIL, a non-profit organization; WILDLANDS NETWORK, a non-profit organization; and the HELENA HUNTERS AND ANGLERS ASSOCIATION, a non-profit organization,

Plaintiffs,

vs.

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

Federal-Defendants.

INTRODUCTION

1. Plaintiffs bring this civil action against Federal-Defendants (the U.S. Fish and Wildlife Service or Service) under section 11(g) of the Endangered Species Act ("ESA"), 16 U.S.C. § 1540(g), and the

Administrative Procedure Act ("APA"), 5 U.S.C. § 701 *et seq*., for violations of the ESA.

2. This case challenges the Service's October, 2020 withdrawal of its 2013 proposed rule to list the North American wolverine (*Gulo gulo lucus*) in the contiguous United States as a threatened distinct population segment ("DPS") under the ESA (hereinafter "2020 withdrawal decision").

3. This is Plaintiffs' second time challenging the Service's withdrawal of the 2013 proposed rule to list wolverines. The Service previously withdrew the proposed rule in 2014. Plaintiffs challenged that decision for violating the ESA. In *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d 975 (D. Mont. 2016), the court agreed and vacated the Service's 2014 withdrawal decision and remanded the matter back to the agency for further consideration consistent with its order.

4. Following *Defenders of Wildlife*, the Service prepared a wolverine species status assessment ("SSA") to inform its new decision on remand. A draft SSA was shared and discussed with the states and various industry-groups. The states and industry groups urged the Service not to list wolverines. The states and industry groups said

wolverines in the contiguous United States do not qualify as a DPS and do not qualify as a threatened species under the ESA. The draft SSA was not shared with Plaintiffs or other conservation organizations (they had to request a copy from the agency via the Freedom of Information Act (FOIA)). Nor was the draft SSA shared with five of the seven wolverine biologists who peer-reviewed the 2013 proposed listing rule.

5. Based on the SSA, the Service decided – once again – to withdraw the 2013 proposed rule to list wolverine. This time, the Service determined wolverines in the contiguous United States do not qualify as a DPS. The Service also determined wolverines are not threatened by climate change, small population size and low genetic diversity, or other cumulative threats. There is no legal or scientific support for this decision.

6. Plaintiffs – a coalition of wildlife conservation organizations dedicated to ensuring the survival and recovery of wolverines in the contiguous United States – are thus compelled to bring this second civil action. The Service's 2020 withdrawal decision is arbitrary, capricious, an abuse of discretion, and not in accordance with the ESA.

JURISDICTION AND VENUE

7. This Court has jurisdiction under 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(s) and/or inaction(s) complained of herein and grant the relief requested under 16 U.S.C. § 1540(g) and 5 U.S.C. § 706.

9. Plaintiffs exhausted all available administrative remedies. All requirements for judicial review required by the ESA are satisfied. Plaintiffs sent the Service a sixty-day notice of intent to sue letter (along with attached studies) in accordance with the ESA via email and Fed Ex (delivery confirmation). The Service confirmed receipt of this letter (and the attached studies) on October 13, 2020. More than sixty days have elapsed since the Service received Plaintiffs' sixty-day notice letter. All requirements for judicial review required by the APA have also been satisfied.

10. The relief sought is authorized by 28 U.S.C. § 2201, 28 U.S.C. § 2202, 16 U.S.C. § 1540, and 5 U.S.C. § 706.

11. Venue is proper in this Court under 16 U.S.C. § 1540(g)(3)(A) and 28 U.S.C. § 1391(e).

12. Plaintiffs have organizational standing. Plaintiffs satisfy the minimum requirements for Article III standing. Plaintiffs – including their members, supporters, and staff – have suffered and continue to suffer injuries to their interests in wolverine and wolverine conservation from the Service's 2020 withdrawal decision. This Court can redress these injuries by granting the relief requested. There is a present and actual controversy between the Parties.

PARTIES

13. Plaintiff, WILDEARTH GUARDIANS ("Guardians"), is a non-profit conservation organization dedicated to protecting and restoring the wildlife, wild places, wild rivers, and the health of the American West. Guardians is specifically committed to ensuring the survival and recovery of wolverine. Guardians has approximately 235,000 active members and supporters across the American West, including many who reside in Montana, Idaho, Wyoming, and Washington. Guardians maintains an office in Missoula, Montana, where most of its work to conserve wolverines occurs. Guardians brings this action on behalf of itself, its members, and its supporters.

14. 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 brings this action on behalf of itself, its members, and its supporters.

15. Plaintiff, FRIENDS OF THE WILD SWAN, is a non-profit organization with its principal place of business in Swan Lake, Montana. Friends of the Wild Swan is dedicated to protecting and restoring water quality and fish and wildlife habitat in northwest Montana, including habitat for wolverine. Ensuring the survival and recovery of native carnivores, including wolverine, is one of Friends of the Wild Swan's main focus areas. Friends of the Wild Swan brings this action on behalf of itself, its members, and its supporters.

16. Plaintiff, 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 Service bases listing decisions on the best available science. The Swan View Coalition is based in Kalispell, Montana. The Swan View Coalition brings this action on behalf of itself, its members, and its supporters.

17. Plaintiff, OREGON WILD, is a non-profit organization 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 the Pacific Northwest's wildlands, wildlife (including wolverine), and waters as an enduring legacy. Oregon Wild brings this action on behalf of itself, its members, and its supporters.

18. Plaintiff, CASCADIA WILDLANDS, is a non-profit organization with approximately 12,000 members and supporters throughout the United States. Cascadia Wildlands works to educate, protect, and restore the Cascadia region's wild ecosystems and native species, including wolverine. Cascadia Wildlands brings this action on behalf of itself, its members, and its supporters.

19. Plaintiff, ALLIANCE FOR THE WILD ROCKIES (the Alliance) is a non-profit conservation and education organization with

approximately 2,000 members and supporters. 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. The Alliance brings this action on behalf of itself, its members, and its supporters.

20. Plaintiff, 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. Cottonwood brings this action on behalf of itself, its members, and its supporters.

21. Plaintiff, GEORGE WUERTHNER, is an ecologist, prolific writer and photographer who has viewed wolverines and wolverine tracks in the wild. Mr. Wuerthner currently splits his time between Oregon and Montana. Mr. Wuerthner brings this action on behalf of himself.

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

Montana is based in Missoula, Montana. Footloose Montana brings this action on behalf of itself, its members, and its supporters.

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 of this mission, Native Ecosystems Council's members and staff have been active in wildlife management, including for wolverine, in the Northern Rockies region for more than 20 years. Native Ecosystems Council brings this action on behalf of itself, its members, and its supporters.

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. Wildlands Network brings this action on behalf of itself, its members, and its supporters.

25. Plaintiff, HELENA HUNTERS AND ANGLERS ASSOCIATON, 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 promotes the highest standards of ethical conduct and sportsmanship and promotes outdoor recreational opportunities for all citizens to share equally. Helena Hunters is based in Helena, Montana. Helena Hunters brings this action on behalf of itself, its members, and its supporters.

26. Plaintiffs have members and supporters who have standing to pursue this civil action in their own right and their interests in wolverine and wolverine conservation (at stake in this case) are germane to their respective organization's purposes.

27. Plaintiffs' members, supporters, and staff 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 available science.

28. Plaintiffs' members, supporters, and staff understand the importance of listing for wolverine and what it means to wolverine

conservation in the contiguous United States. Plaintiffs' members, supporters, and staff also understand the importance of complying with the law, regulations, and policy, and applying the best science when making important decisions about listing species.

29. Plaintiffs' members, supporters, and staff live in or near and/or routinely recreate in or near areas occupied by wolverines. Plaintiffs' members, supporters, and staff enjoy observing–or attempting to observe–and studying wolverines, including signs of the wolverine's presence and/or photographing wolverine in areas where the species is known to den, travel, and occur. The opportunity to view wolverine or signs of wolverine in the wild by itself is of significant interest and value to Plaintiffs' members, supporters, and staff and increases their use and enjoyment of areas where wolverine may still exist.

30. Plaintiffs' members, supporters, and staff derive aesthetic, recreational, scientific, inspirational, educational, spiritual, and other benefits from wolverine and working to conserve wolverine in the contiguous United States. Plaintiffs' members, supporters, and staff enjoy working to protect and restore wolverine in the American West. In furtherance of these interests, Plaintiffs' members, supporters, and staff

have worked and continue to work to conserve wolverine. Ensuring the Service evaluates the ESA's threat factors, complies with the ESA, properly defines the foreseeable future, and utilizes the best available science when making listing decisions is a key component of Plaintiffs' interests in wolverine and wolverine conservation.

31. The Service's 2020 withdrawal decision has harmed, is likely to harm, and will continue to harm Plaintiffs' interests in wolverine and wolverine conservation. Instead of listing wolverine and then applying the additional protections and conservation measures afforded by the ESA which are designed to conserve the species (e.g., prohibitions on take, consultation, developing a conservation strategy, recovery planning, reintroductions, designating critical habitat, etc.) wolverines now remain without federal protections in the contiguous United States. This has harmed and will continue to harm Plaintiffs' interests in wolverine and wolverine recovery.

32. Plaintiffs' interests have been, are being, and unless the requested relief is granted, will continue to be harmed by the Service's 2020 withdrawal decision.

33. If this Court issues the relief requested the harm to Plaintiffs' interests will be alleviated and/or lessened.

34. Federal-Defendant, DAVID BERNHARDT, is sued in his official capacity as Secretary of the Interior. As Secretary, Mr. Bernhardt is the federal official with responsibility for all Service officials' actions and/or inactions challenged in this case.

35. Federal-Defendant, the UNITED STATES DEPARTMENT OF THE INTERIOR, is the federal department responsible for applying and implementing the federal laws and regulations challenged in this case.

36. Federal-Defendant AUERELIA SKIPWITH is sued in her official capacity as Director of the U.S. Fish and Wildlife Service. As Director, Ms. Skipwith is the federal official with responsibility for all Service officials' actions and/or inactions challenged in this case.

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

BACKGROUND

The wolverine

38. The North American wolverine (*Gulo gulo lucus*) is the largest terrestrial member of the weasel family, resembling a small bear.

39. Wolverines are morphologically, demographically, and behaviorally adapted to cold environments where snow is present much of the year.

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

41. Wolverines operate at a higher metabolic rate than other animals their size. Wolverines have short appendages and a rotund body shape which are adaptive features designed to reduce surface area while increasing mass (surface area to body mass ratio), thereby increasing core warmth. 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 wolverine pelts extremely desirable and valuable).

42. 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. Wolverines have sharp front teeth, long

fangs, and cheek teeth designed for cutting. A wolverine's bite force is extremely strong which allows it to scavenge and feed on carcasses (and bones) that have already been worked over by other predators.

43. Reproductive rates for wolverines are among the lowest known for mammals. 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 for female wolverines to forgo reproducing every year. Wolverines generally breed 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. Wolverine litters are born from mid-February through March.

44. Female wolverines use natal (birthing) dens that are excavated in snow. A wolverine's natal den consists of tunnels that contain well-used runways and bed sites and may naturally incorporate shrubs, rocks, and downed logs as part of their structure. Deep snow that persists into the late spring is essential for wolverine reproduction. Wolverine display an obligate relationship with snow for natal denning.

Wolverines require snow in order to reproduce. 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). Wolverine distribution in the contiguous United States can be reliably delineated by the presence of persistent spring snow.

45. In Glacier National Park, the snowpack at active den sites averaged 2.6 meters in depth at the end of April and into early May. A snow depth of 0.5 meters is insufficient for wolverine denning.

46. In Glacier National Park, all but three of the 14 wolverine dens documented in previous studies were located between 1800 and 2000 meters of elevation. Two dens were above 2000 meters (at approximately 2250 meters and 2100 meters) and one den was located below 1800 meters (at approximately 1500 meters). No wolverine dens were documented above 2300 meters.

47. Female wolverines have been known to abandon reproductive dens when temperatures warm and snow conditions become wet.

48. 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. 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.

49. Wolverines do not appear to specialize on specific vegetation or geological habitat aspects. Wolverines select areas that are cold and receive enough winter precipitation to reliably maintain snow late into the warm season. This niche results in inherently vulnerable populations in the contiguous United States due to low densities and limited capacity for growth.

50. Wolverines opportunistically feed on a variety of food sources. Wolverines scavenge on carcasses, prey upon small animals, birds, and ungulates, and eat fruit, berries and insects. For wolverines, the availability and distribution of food is likely the primary factor in determining wolverine movements and home range size.

51. Female wolverines forage close to den sites in early summer,

progressively ranging further from dens as kits become more independent. Female wolverines (even lactating females) have been documented traveling as much as 16 kilometers from den sites in search of food.

52. Wolverine territories in Montana 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. Adult male wolverines generally cover greater distances than female wolverines.

53. 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 also exist in parts of the Great Plains, Great Lakes, Midwest, and Northeastern United States. Wolverine habitat currently exists in portions of Washington, Oregon, California, Idaho, Montana, Wyoming, Colorado, Nevada, Utah, and northern New Mexico.

54. The majority (95%) of wolverine habitat in the contiguous United States is federally owned and managed by the Forest Service. There are no regulatory mechanisms or standards in Forest Service Land and Resource Management Plans for wolverines.

55. Wolverines in the contiguous United States exist as a metapopulation. A metapopulation is a network of semi-isolated subpopulations, 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.

56. Wolverines in Canada exist as a panmictic population. A panmictic population is one in which all individuals have an equal probability of interbreeding. A panmictic population is one in which all members randomly interbreed.

57. Wolverines in the contiguous United States were trapped, hunted, and poisoned to near extinction in the 1800s and early 1900s. Wolverines have yet to recover from these early levels of mortality. Wolverines in the contiguous United States currently exist as a network of relatively small and increasingly isolated subpopulations, some

consisting of less than 10 individuals. Persistence of subpopulations under these conditions requires movement between subpopulations (across both suitable and unsuitable wolverine habitat).

58. The best available science estimates that approximately 318 wolverines remain in the contiguous United States. This is a best guess based on occurrence records and habitat availability. The best available science estimates that the effective population is likely less than 40. The best available science estimates there are over 10,000 individual wolverines in Canada.

The Service's 2010 finding that wolverines qualify as a threatened DPS

59. In December, 2010 the Service determined that a DPS of wolverines occurring in the contiguous United States warranted listing as a "threatened" species under the ESA (hereinafter "wolverines").

60. In 2010, the Service determined wolverines were "discrete" from wolverines in Canada. The Service determined wolverines were "discrete" due to "differences in conservation status as delimited by international boundary." The Service said the conservation status of wolverines "differs significantly" from that of the Canadian population.

The Service said the Canada population of wolverines is large, well-connected, and exists in large blocks of contiguous habitat.

61. In 2010, the Service said the contiguous United States population of wolverines is small in total size and is fragmented on small patches of suitable habitat that are separated by large areas of suitable habitat. The Service said the differences in the conservation status and habitat between the Canada population of wolverines and the contiguous United States population of wolverines means the Canadian population is more "robust" and "better able to respond to habitat changes," while the contiguous United States population is "vulnerable to changes in habitat or management."

62. In 2010, the Service said the differences in conservation status between wolverines in Canada and wolverines in the contiguous United States reveals "that existing mechanisms" in Canada are sufficient to maintain wolverines but not sufficient in the contiguous United States. The Service said the differences in conservation status between wolverines in Canada and wolverines in the contiguous United States are likely "to become more significant" in light of the threats.

63. In 2010, the Service said its threatened finding for the wolverine DPS was premised on the best available science. The Service said that the combination of exposure and some corroborating evidence of how the species is likely impacted suffices for listing under the ESA. The Service determined wolverines were threatened by loss of habitat due to continuing climate warming. The Service said the impacts of climate change are a threat to wolverines now and will likely be irreversible within the foreseeable future.

64. In 2010, the Service projected likely losses of wolverine habitat from climate change out to 2099. The Service defined the "foreseeable future" out to 2099. The Service said climate changes are projected to reduce suitable wolverine habitat in the contiguous United States by 25 percent by 2045 and by 63 percent by the time interval between 2070 and 2099.

65. In 2010, the Service determined that current regulatory mechanisms to protect wolverine from various threats (including climate change) were inadequate.

66. In 2010, the Service determined wolverines were threatened by small population size and low genetic diversity (as a secondary

threat). The Service said wolverines in the contiguous United States exist as a small (250-300 individuals) and generally depauperate (3 of 13 haplotypes) metapopulation with limited dispersal between subpopulations. The Service said this threat is likely to get worse due to climate changes which will reduce the overall habitat size and connectivity between habitat patches.

67. In 2010, the Service said it would develop a proposed rule to list wolverines as a threatened DPS.

The Service's 2013 proposed rule to list wolverines

68. In February, 2013, the Service published notice of a proposed rule to list wolverines as a threatened DPS. The Service again determined wolverines qualified as a DPS. The Service said wolverines in the contiguous United States are discrete from wolverines in Canada. The Service said discreetness was met due to differences in conservation status and management.

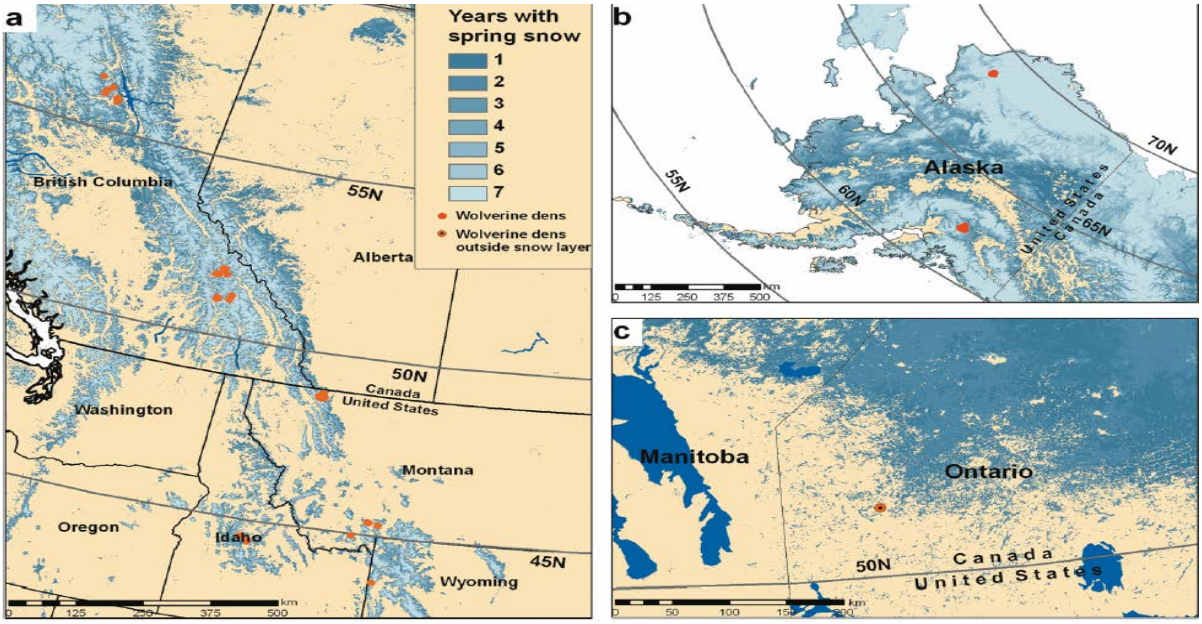
69. During peer review of the 2013 proposed rule, one peer-reviewer (Schwartz) stated that wolverines may also be discrete because they are "markedly separated" populations. Schwartz said only a small subset of haplotypes are found in the contiguous United States

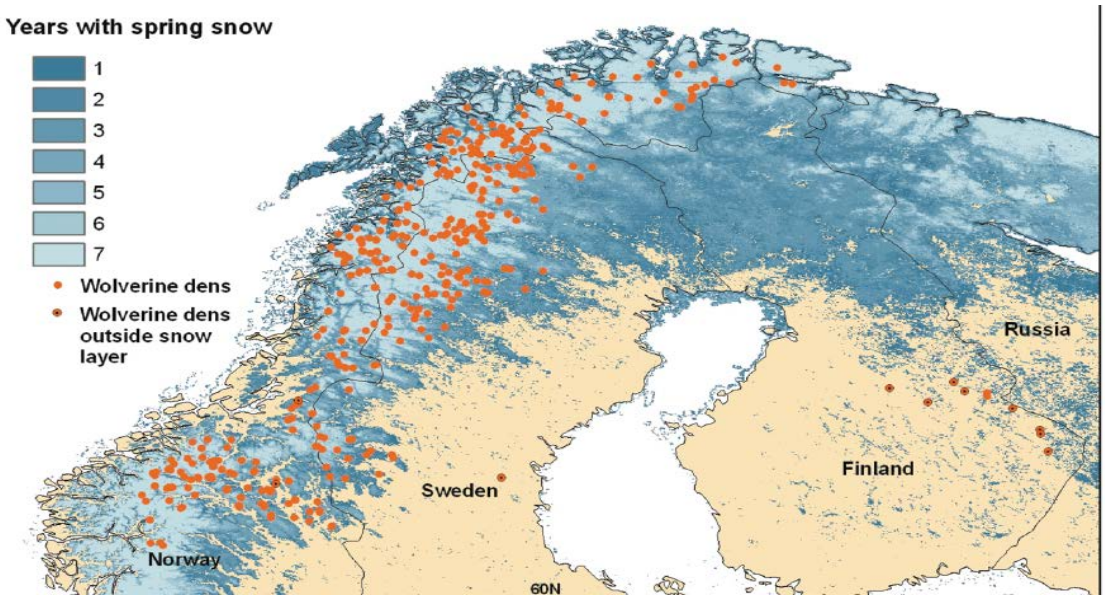
population of wolverines compared to the Canadian population, which is indicative of a barrier to movement.

70. In 2013, the Service determined that habitat loss due to increasing temperatures and reduced late spring snowpack is likely to have a significant negative population-level impact on wolverines.

71. The Service's 2013 proposed rule was based on Copeland (2010). Copeland (2010) proposed a "bioclimatic envelope" for wolverine distribution based on the species' obligate association with persistent spring snow cover for successful reproductive denning (and an upper limit of thermoneutrality).

72. Copeland (2010) compared and correlated two data layers: (1) a snow layer describing areas with persistent spring snow cover over a seven-year period from 2000 to 2006 (between April 24th and May 15th); and (2) a wolverine denning layer for all 562 verified wolverine reproductive den sites in North America and other regions. The purpose of the second layer (known wolverine den sites) was to assess whether the first layer (persistent spring snow) was a good fit.





73. Copeland (2010) revealed that 97.9 percent of the 562 verified wolverine den sites occurred within the persistent spring snow layer. Copeland (2010) revealed that 100 percent of the verified wolverine den sites in the contiguous United States occurred inside the persistent

spring snow layer. Twelve den sites were located outside the persistent spring snow layer. Further investigation of the twelve den sites revealed they were located in snow (but simply not captured by the snow layer for various reasons, including tree-canopy cover).

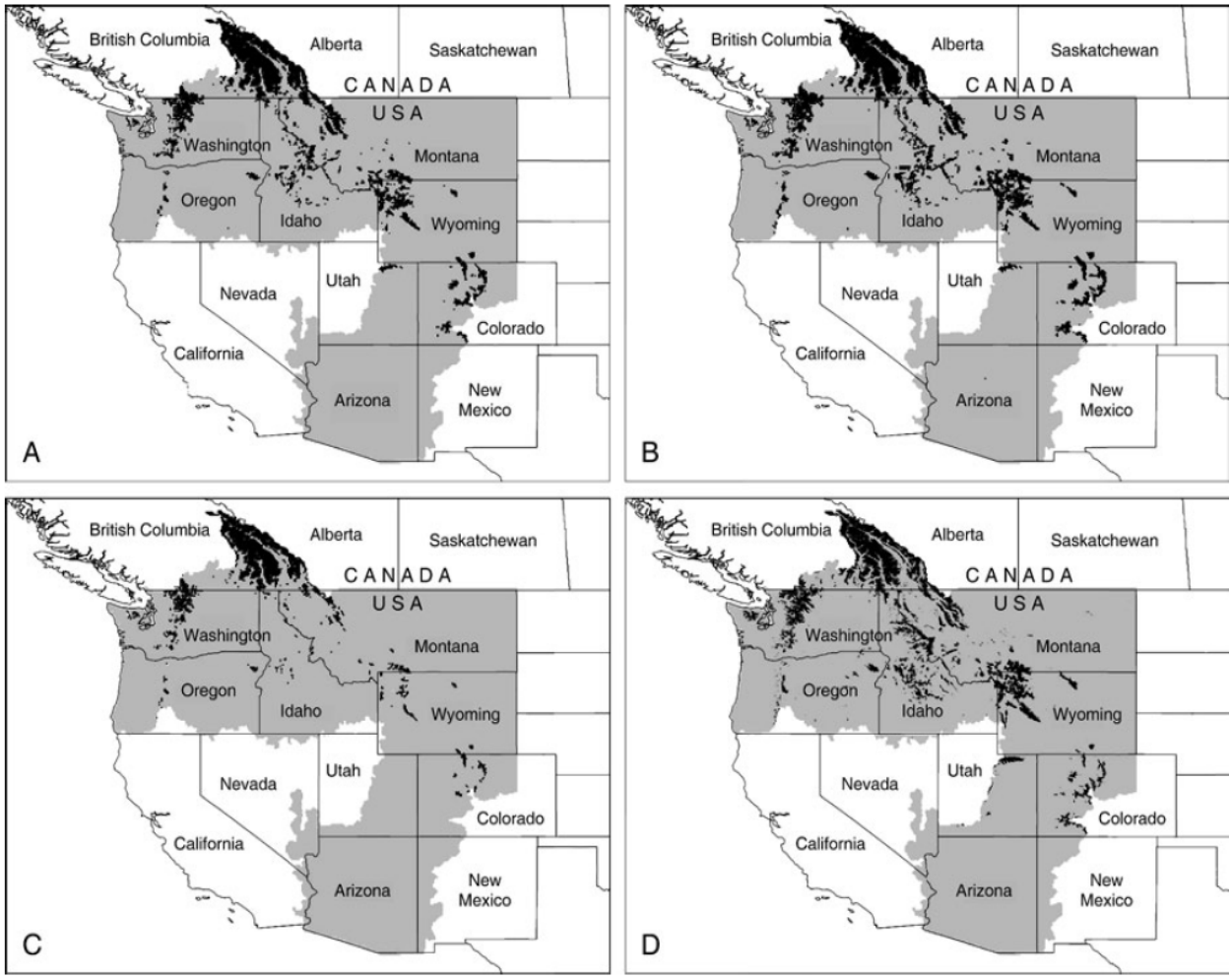
74. Copeland (2010) found a strong concordance of wolverine den sites with the spring snow cover layer. This concordance reflects an obligatory relationship with snow cover for reproductive dens. Copeland (2010) said the denning requirements of the wolverine primarily determine the limits of its circumboreal range. Copeland (2010) concluded that reductions in spring snow cover associated with climatic warming will likely reduce the extent of wolverine habitat, with an associated loss of connectivity.

75. Copeland (2010) stated that significant reductions in spring snow cover associated with climate warming have already occurred in some portions of the wolverine's range in the contiguous United States. Copeland said if these trends continue, habitat conditions for wolverine will be diminished through reductions in size of habitat patches and associated loss of connectivity.

76. The Service's 2013 proposed rule was also based on McKelvey (2011). McKelvey (2011) was designed to pick up where Copeland (2010) left off by utilizing the best available science (regional snow models) to predict the future extent and distribution of persistent spring snow.

77. McKelvey (2011) hypothesized that if Copeland (2010) is correct and the persistent spring snow cover layer provides a good fit for the current (and historic) understandings of the wolverine's circumboreal range, then it is reasonable to assume that it will also constrain the wolverine's future range and distribution.

78. McKelvey (2011) noted that predicting the future extent and distribution of persistent spring snow cover can help identify likely areas of range loss and persistence, and resulting patterns of connectivity. McKelvey (2011) made this prediction based on the best available global climate models, as recommended by the Intergovernmental Panel on Climate Change ("IPCC"). McKelvey (2011) predicted losses of spring snowpack based on four emissions scenarios (the most commonly employed – all mid-range to conservative).



79. McKelvey (2011) found that given the warming trend, spring snow cover is expected to decline and snow-covered areas are expected to become more fragmented and isolated which will create many small and isolated wolverine populations in the contiguous United States. Small and isolated wolverine populations are subject to high levels of demographic and genetic stochasticity.

80. McKelvey (2011) predicted that by 2045, the study area would retain only 67% of its historic spring snow cover. McKelvey (2011)

predicted that by 2085, the study area would retain only 37% of its historic spring snow cover.

81. McKelvey (2011) said that although wolverine distribution is closely tied to persistent spring snow, it is unknown how fine-scale changes in snow patterns within wolverine home ranges may affect population persistence. McKelvey (2011) said they expect the wolverine's range and connectivity to decline in the western contiguous United States with continued global warming.

82. Copeland (2010) and McKelvey (2011) are the best available science on projecting the future impacts of climate change on wolverine habitat. Based on Copeland (2010) and McKelvey (2011), the Service determined that in the foreseeable future, wolverine habitat is likely to be reduced to the point that the wolverines in the contiguous United States are in danger of extinction.

83. In the 2013 proposed rule, the Service evaluated impacts from climate change out to 2099. The Service defined 2099 as the foreseeable future. The best available science evaluated impacts out to 2099.

84. In the 2013 proposed rule, the Service said the small population size of wolverines in the contiguous United States and

resulting inbreeding depression and low genetic diversity is a potential threat. The Service said genetic diversity in the contiguous United States is lower than Canada. The Service said the effect of small population size and low genetic diversity may become more significant as populations become smaller and more isolated as predicted due to climate change.

85. In the 2013 proposed rule, the Service said that when working in concert with climate-change, small population numbers, genetic threats, and human caused mortality from trapping pose a threat to wolverine in the contiguous United States. The Service said 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.

86. The Service's 2013 proposed rule was based on the best available science.

87. The Service's 2013 proposed rule to list wolverines was subject to peer review. The Service asked a group of seven experts to review the science behind the Service's proposed rule. Five of the seven reviewers

supported the conclusion that the proposed listing decision was both logical and supported by the best available science.

88. Dr. John Squires said the proposed rule "provided a logical and transparent rationale for the proposed listing" that was supported "with a clear presentation of the most relevant literature." Dr. Michael Schwartz found the Service's proposed rule to be "logical and informative" and "an excellent piece of work." William Zielinski, Research Ecologist with the Forest Service's Pacific Southwest Research Station found the 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." 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. Keith Aubry, a Research Wildlife Biologist with the Forest Service's Pacific Northwest Research Station, found the proposed rule to

be "logical and supported by the evidence." Aubry found the Service's findings to be "careful, thoughtful, and scientifically defensible."

89. In February, 2013, the Service prepared a draft recovery outline for wolverine.

90. The Service's draft recovery outline recognizes wolverines in the contiguous United States as a DPS. The recovery outline recognizes wolverines as a threatened species. The recovery outline envisions that recovery of wolverine in the contiguous United States will require a functioning metapopulatoin composed of numerous subpopulations with sufficient connectivity between them and with the larger wolverine population in Canada.

91. The recovery outline recognizes that climate change is likely to reduce the availability of wolverine habitat in the contiguous United States. The recovery outline recognizes that wolverines can be made resilient to climate change impacts through range expansion, reducing all non-climate stressors on the species, continued research, and continued monitoring on population numbers, range, and genetic health.

92. In April, 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.

93. The nine panelists concluded unanimously that the scientific conclusions in the 2013 proposed listing rule regarding the threats to the species from climate change were well supported.

94. The nine panelists agreed on the importance of deep snow for wolverines at the denning scale. Most of the panelists also agreed that McKelvey (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 believed that the impacts of climate change on wolverine habitat may be greater than or less than the projections in McKelvey (2011) but concluded there was no indication that McKelvey (2011) showed systematic error resulting in a one-sided bias.

95. 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.

96. In July, 2014, the American Society of Mammalogists ("ASM") and the Society for Conservation Biology ("SCB") sent the Service a letter supporting the listing of wolverine in the contiguous United States as a threatened DPS under the ESA. The ASM and SCB said they believe the best available science supports listing wolverines. The ASM and SCB offered to assist the Service with additional external review of the relevant wolverine and climate science, if necessary.

97. In July, 2014, fifty-six wildlife ecologists and conservation biologists sent a letter to the Service supporting the listing of wolverines as a threatened DPS. The biologists said the 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 2014 withdrawal of the proposed listing rule

98. In August, 2014, the Service issued a final decision withdrawing the 2013 proposed rule to list wolverine in the contiguous United States as a DPS.

99. The Service's 2014 withdrawal determined wolverine qualified as a DPS but that the threats were not "as significant as believed."

100. The Service's 2014 withdrawal noted that Copeland (2010) and McKelvey (2011) remain the best available science but that more information was needed in order to understand how wolverine will respond to future climate effects. The Service also noted that wolverines were not threatened by small population size or low genetic diversity or cumulative threats.

101. The Service's 2014 withdrawal notes that Schwartz (2009) is the best available science on whether there is a "genetic break" between wolverines in the contiguous United States and wolverines in Canada. Schwartz (2009) provides evidence of a genetic break between populations near the international border. The Service's 2014 withdrawal recognizes there is an "apparent lack of gene flow across the international boundary."

Defenders of Wildlife v. Jewell

102. Plaintiffs and other conservation organizations challenged the Service's 2014 withdrawal decision. *See Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d 975 (D. Mont. 2016).

103. In *Defenders of Wildlife*, the court held that the Service erred when it determined that climate change and projected spring snow cover would not impact the wolverine at the reproductive denning scale in the foreseeable future. The court held that the Service erred when it determined that small population size and low genetic diversity do not pose an independent threat to wolverine viability in the contiguous United States. The court held that the Service must revisit its "significant portion of its range" analysis for wolverine in the contiguous United States. The court denied the intervenors' claim the wolverine in the contiguous United States do not (and cannot) qualify as a DPS. The court upheld the Service's finding that wolverine in the contiguous United States qualify as a DPS. The court vacated the Service's 2014 withdrawal of its 2013 proposed rule to list wolverine as a threatened species and remanded the matter back to the Service for further consideration consistent with its order.

104. Following *Defenders of Wildlife*, the Service compiled a team of agency employees to work on a new decision to either list wolverines or once again withdraw the 2013 proposed listing rule.

105. In January, 2017, the Service estimated that a final decision to list wolverines or withdraw the 2013 proposed listing rule would be issued by the end of fiscal year 2018.

106. In January, 2017, the Service recognized that climate change models projected increased temperatures in the wolverine's range in the contiguous United States. The Service recognized that drought duration and intensity could be worse with increased temperatures. The Service recognized that snow cover within the wolverine's range in the contiguous United States is projected to decline (but will vary by elevation, topography, and region).

The 2018 wolverine species status assessment (SSA)

107. In October, 2017, the Service published a draft species status assessment ("SSA") for wolverine.

108. The draft SSA was shared with the states. Some states submitted comments objecting to the listing of wolverine as a threatened species. Some states objected to the Service's recognition of wolverines as a DPS. Idaho objected to the Service's recognition of wolverines as a DPS. Montana objected to the Service's recognition of wolverines as a DPS.

109. The draft SSA was shared with various industry and trade groups. The International Snowmobile Manufacturer's Association reviewed and submitted comments on the draft SSA. The International Snowmobile Manufacturer's Association objected to the Service's

recognition of wolverines as a DPS. The American Petroleum Institute reviewed and submitted comments on the draft SSA. The American Petroleum Institute objected to the Service's recognition of wolverines as a DPS. The Western Energy Alliance reviewed and submitted comments on the draft SSA. The Western Energy Alliance objected to the Service's recognition of wolverines as a DPS. The Utility Air Regulatory Group reviewed and submitted comments on the draft SSA. The Utility Air Regulatory Group objected to the Service's recognition of wolverines as a DPS.

110. The draft SSA was not shared with members of the public. The draft SSA was not shared with conservation organizations. The draft SSA was not shared with plaintiffs from *Defenders of Wildlife*. Plaintiffs were never given the opportunity to review and comment on the draft SSA. The draft SSA was not shared with the seven wolverine biologists who peer reviewed the 2013 proposed rule (except two of the seven who opposed listing).

111. The draft SSA was submitted for peer review to four biologists (none of whom worked on the 2013 proposed listing rule).

112. The peer reviewers expressed concern about the scientific integrity of the draft SSA and its findings.

113. A peer reviewer said "… it appears that the authors have made an inference that climate change is insignificant to wolverines and are going to great lengths to dismiss inconvenient truths."

114. A peer reviewer said the document "did not utilize all pertinent information and tended to heavily rely on select references to support conclusions. This was pervasive throughout [the draft SSA]."

115. A peer reviewer said that while the document referenced the most relevant papers, it "misrepresented or cherry-picked information in those papers." A peer reviewer said that the assumptions and methods used in the [draft] SSA have not been clearly and logically stated. Conclusions are often made based on little or no scientific evaluation of the information."

116. A peer reviewer said "climate models suggest that while large tracts of wolverine habitat will remain in the future, populations will become increasingly isolated, and some populations could become isolated in terms of female immigration . . . Combined, this paints a rather troubling picture for wolverine populations in the future and suggests more active monitoring and management (including introductions) could be warranted."

117. A peer reviewer said the document "suffers from pervasive bias in its use and interpretation of information. There is an overall failure to scientifically evaluate information used to formulate conclusions."

118. A peer reviewer raised concerns about how the foreseeable future was defined – noting that "models indicate significant reductions in suitable habitat after 2050."

119. In March, 2018, the Service published a final SSA.

120. In the final SSA, the Service states that wolverines select den sites for different characteristics, depending on location and environmental conditions (without reference to snow). This statement conflicts with the best available science. There is no scientific support for this statement. Heim (2017) does not support this statement. Every wolverine den ever recorded in the contiguous United States is in deep snow. The commonality amongst all wolverine dens documented world-wide is their occurrence in snow.

121. In the final SSA, the Service says Webb (2016) reveals wolverines are adaptable and may not require deep spring snowpack for successful denning and reproduction. The final SSA mischaracterizes and misrepresents Webb (2016).

122. Webb (2016) evaluated wolverine presence in the Boreal Forest of northern Alberta. Webb (2016) did not evaluate wolverine presence or wolverine denning in the contiguous United States. Webb (2016) said it is "important to view the Rocky Mountains and Boreal Forest data separately when drawing conclusions." The Service said in 2014 that reliance on studies in flat Boreal Forest Habitat would be "largely irrelevant" to habitats in the contiguous United States. Webb (2016) states that the "global distribution of wolverines overlaps [with] spring snow cover" but recognizes that wolverines occurring in northern Alberta "appear to be an anomaly" occurring in a relatively flat and

"less snowy" area. Webb (2016) stated that further research is required and that the "next step is documenting the time period when dens are snow-covered in different habitat types in relation to demographic characteristics and reproductive success." Webb (2016) said further research "is needed to document the mechanisms behind why wolverines require snow in spring.

123. Webb (2016) states that in northern Alberta temperature may play a more important role for wolverine denning than snow. Webb (2016) states that in "northern Alberta, where the dry but cold climate limits snow, temperature may play a more important role in characterizing the distribution of wolverines and restricting the wolverine's niche to cooler environments where wolverines have the competitive edge." Copeland (2010) made a similar finding.

124. Webb (2016) concluded that the likelihood of wolverine presence is significantly increased by areas of deep snow. This conclusion is consistent with Copeland (2010).

125. Webb (2016) does not conflict with Copeland (2010). Webb (2016) refers to and cites Copeland (2010) as the best available science.

126. In the SSA, the Service says Copeland (2010) did not evaluate snow persistence at the den site scale based on location and denning period. The purpose of Copeland (2010) was not to model snow persistence at the den site scale based on location and denning period.

Webb (2016) did not evaluate snow persistence at the den site scale based on location and denning period.

127. Webb (2016) states that "it appears that wolverines are adaptable and do not need large areas of deep spring snowpack to successfully reproduce." Webb (2016) made no attempt to measure snow depth at wolverine den sites. Webb (2016) only generalized snow depth at den sites. Webb (2016) did not document wolverine den sites. Webb (2016) looked at where wolverines were harvested throughout Alberta and where wolverines were documented on baited cameras. Webb (2016) relied almost exclusively (besides the cameras) on wolverine trapping records and information from trappers to determine wolverine presence related to snow presence. Webb (2016) assumed that the presence of a female wolverine in a harvest record or baited trap camera in areas of shallow snow suggests something about snow conditions at a denning site. The presence of a female wolverine in a particular area does not suggest or reveal conditions at a denning site.

128. In the SSA, the Service repeatedly states that it finds "no reason to believe that the wolverine cannot adapt" to climate change and a warming planet. This statement conflicts with the best available science. There is no scientific support for this statement. The adaptive capability of wolverines can best be understood by the level of variability expressed in its current range.

129. In the SSA, the Service refers to wolverine as a "habitat generalist." This statement conflicts with the best available science. There is no scientific support for this statement. Wolverines have an obligation relationship with cold, snowy environments.

130. In the SSA, the Service states that the wolverine's distribution is large and broad and the species inhabits a "variety of habitats." This statement conflicts with the best available science. There is no scientific support for this statement. Wolverine inhabit a variety of landscapes from the northern Canadian artic to the more temperate mountains of the contiguous United States but always remain in "artic-like" cold and snowy environments. Wolverines can tolerate temporary forays into lower elevation and warmer habitats during dispersal events but the species does not exist in regions that do not provide cold, snowy environments necessary to meet its life history requirements. Aubry (2007) stated that the only "habitat layer that fully accounted for historical [wolverine] distribution patterns was spring snow cover."

131. In the SSA, the Service says Ray (2017) reveals that while warming trends will continue in wolverine habitat, high elevations will maintain adequate snow levels to provide denning habitat. The SSA mischaracterizes and misinterprets Ray (2017).

132. Ray (2017) assumes that the availability of persistent spring snow is critical for wolverine denning.

133. Ray (2017) predicts there will be at least 0.5 meters (20 inches) of snow in two high elevation areas (Glacier National Park and Rocky Mountain National Park) for the next 35 years (until 2055). Ray (2017) only projects future snow persistence in these two high elevation areas. Ray (2017) did not model snow redistribution from wind and avalanches or other small-scale processes. Ray (2017) states that its data is representative of 250-meter areas, not den sites.

134. Ray (2017) does not project the likelihood of future snow persistence beyond 2055. Ray (2017) only projected the likelihood of future snow persistence out to 2055 due to lack of capacity, funding, and time (not because of uncertainty). 2055 is only 35 years out. 2055 is not the foreseeable future.

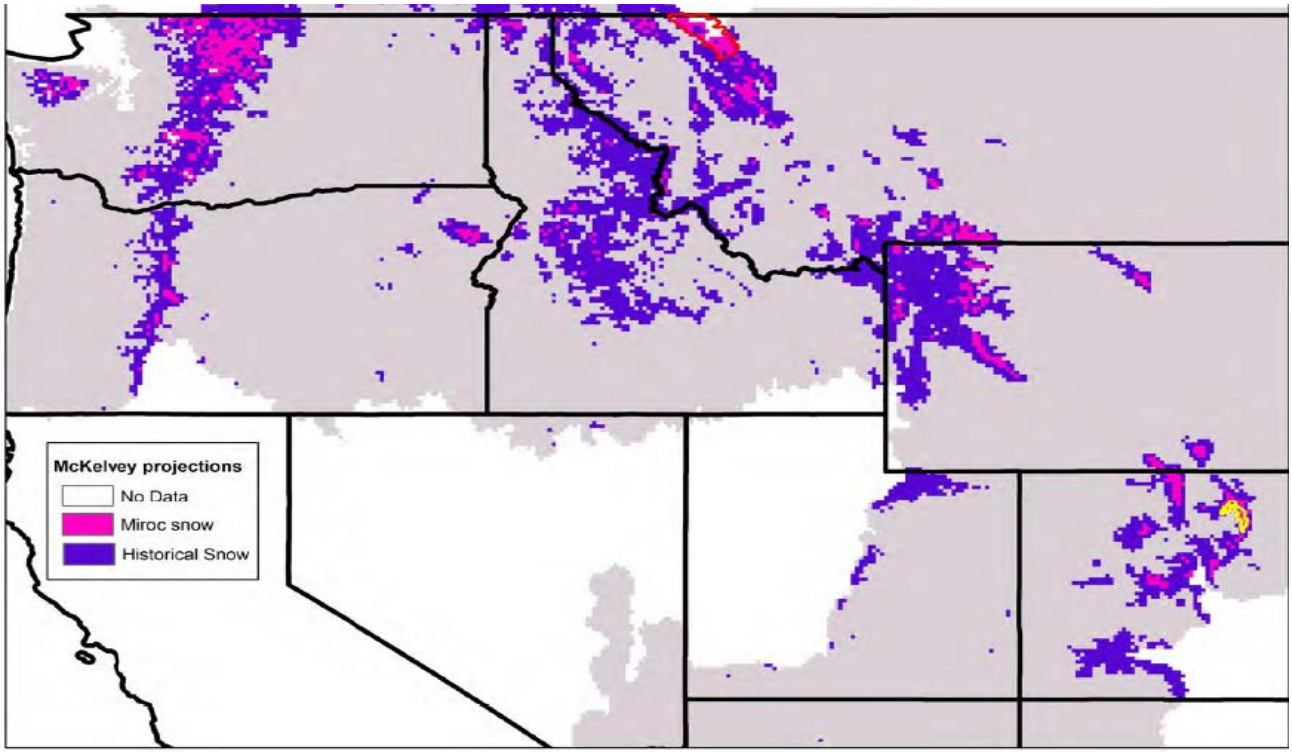
135. Ray (2017) did not use actual snow depth values (even though they exist). Ray (2017) extrapolated snow depth from snow water equivalence ("SWE"). SWE depends heavily on the density of the snow at varying time periods. Ray (2017) uses a snow depth value of 0.5 meters to delineate areas with "deep" persistent snow. Ray (2017) assumes that if snow depth diminishes from 2.6 meters to 0.5 meters there is "no change" in snow depth. A half meter (20 inches) is not deep snow. Biologists measured the actual snow depth at wolverine denning sites in Glacier National Park the first week of May (over multiple years) to capture an instrument offspring. The actual snow depth at

denning sites averaged 2.5 meters (over twice that projected in Ray (2017)).

136. Ray (2017) uses 2000 to 2013 as the "historic average" to model for changes in snow cover. This "historic average" includes most of the hottest years ever recorded. Using this historic average and projecting only 35 years into the future (to 2055) will produce little change in snow cover. Ray (2017) notes that snow depth is heavily dependent on elevation. Snow depth is heavily dependent on elevation. Ray (2017) used elevations above that generally used as denning habitat to evaluate snowpack changes.

137. Ray (2017) does not conflict with McKelvey (2011). Ray (2017) does not contradict McKelvey (2011). Ray (2017) and McKelvey (2011) ask and answer different questions. Ray (2017) does not discount any findings from McKelvey (2011). Ray (2017) suggests that pockets of deep snow (only 0.5 meters) will likely persist at wolverine den sites in two high elevation areas, even with a warming climate. McKelvey (2011) also predicted that some areas of core wolverine habitat – including the areas of Glacier National Park and Rocky Mountain National Park evaluated in Ray (2017) – would likely maintain substantial snowpack even with climate change projections. Ray (2017) and McKelvey (2011) both show snow persisting at the higher elevations in the same locations (purple shows historic snowpack, pink

is McKelvey (2011)'s projections of reduced snowpack, and Ray (2017)'s sites shown in red and yellow).



138. McKelvey (2011) predicted that large areas of core wolverine habitat (central Idaho, portions of Montana, Greater Yellowstone Area – shown in purple) would not likely maintain sufficient snowpack. McKelvey (2011) predicted a substantial loss of lower elevation snowpack in important dispersal habitat could result in similar losses for subpopulation connectivity.

139. Ray (2017) did not evaluate loss of snowpack or whether sufficient snow cover will persist in areas outside Glacier National Park and Rocky Mountain National Park. Ray (2017) did not evaluate loss of snowpack or whether sufficient snow cover will persist in lower

elevation areas. Ray (2017) did not evaluate loss of snowpack or whether sufficient snow cover will persist in important dispersal habitat for wolverines. The greatest loss of snow cover in McKelvey (2011) occurs at lower elevations than were included in Glacier National Park and Rocky Mountain National Park.

140. McKelvey (2011) provides a more conservative estimate of snow loss than Ray (2017). Ray (2017) projected potential snow loss in high elevations with deep persistent snow of upwards of 57 percent. Ray (2017) projected losses of snow up to 50 percent by 2055 in some climate change models in areas with deep persistent snowpack. Ray (2017) predicts that snowpack will decline sharply in the lower half of wolverine den elevations (and only persistent through 2055 in higher elevations). McKelvey (2011) projected only a 33 percent loss out to the year 2059 and a 63 percent loss out to 2099 for the entirety of the study area (not just regions with deep snowpack).

141. Ray (2017) only evaluated the likelihood of snow persistence. Ray (2017) did not evaluate vegetative responses to climate change. Vegetative responses to climate change are likely. Ray (2017) did not evaluate prey and prey availability responses to climate change. Climate change is likely to affect prey populations. Anything that likely affects prey populations is going to affect wolverine populations.

142. In the SSA, the Service states that the dispersal of single wolverines into areas where they were previously extirpated (Colorado,

California, Utah) provides evidence of subpopulation connectivity and gene flow between subpopulations. This statement conflicts with the best available science.

143. In the SSA, the Service states that wolverines in the contiguous United States are well connected to wolverines in Canada. This statement conflicts with the best available science, including scientific papers on wolverine genetics. The best available science reveals there is a "genetic-break" between wolverine in the contiguous United States and wolverines in Canada. The only documented movement is from a single wolverine in the North Cascades moving north into Canada. Wolverines in the North Cascades are not connected to wolverines in the Northern Rockies. Wolverines in Canada are not well connected to wolverines in the Northern Rockies. Highways present a barrier to movement. Trapping creates a barrier to movement.

144. In the SSA, the Service says trapping along the Canada and United States border does not represent a significant barrier to wolverine movement and dispersal along the international border. This statement conflicts with the best available science. Nearly 70 wolverines have been trapped along the international border.

145. In the SSA, the Service says there is a lack of genetic analyses and demographic studies and more is needed to evaluate the current genetic status of wolverines. Schwartz (2007), Schwartz (2009), and McKelvey (2014) provide genetic analyses relevant to the wolverine

population in the contiguous United States and are the best available science on the topic.

146. In the SSA, the Service says wolverines existing in areas with winter recreational activity, and such activity, are "low stressor[s]" for wolverines. This statement conflicts with the best available science. Heinemeyer (2019) reveals wolverines may respond negatively to winter recreation. Heinemeyer (2019) notes that wolverines avoided areas with winter recreation (both motorized and non-motorized). Heinemeyer (2019) notes that female wolverines exhibited stronger avoidance of off-road motorized recreation and experienced higher indirect habitat loss than male wolverines. Heinemeyer (2019) notes that wolverines showed negative functional responses to the level of recreation exposure within the home range (with female wolverines showing the strongest functional response to motorized winter recreation). Heinemeyer (2019) suggests that indirect habitat loss for wolverines, particularly to females, could be of concern in areas with higher recreation levels. Heinemeyer (2019) speculates that impacts to wolverines from winter recreational activity may increase under climate change if reduced snow pack concentrates winter recreationists and wolverines in the remaining areas of persistent snow cover.

147. In the SSA, the Service states that the physical and ecological needs of wolverines are currently being met and are expected to be met in the future. This statement conflicts with the best available science.

148. In the SSA, the Service says wolverines in the contiguous United States have sufficient redundancy. The Service says wolverines in the contiguous United States continue to expand into historical, previously occupied areas in the contiguous United States. This statement conflicts with the best available science. Documenting a single individual (or few individuals) does not confirm the presence of a population. A few, unverified observations does not confirm the presence of a population. The best available science (including years of research in particular areas) reveals wolverines inhabit only a small fraction of their historic range in the contiguous United States. The best available science reveals the wolverines' range continues to contract in the contiguous United States.

149. In the SSA, the Service says individual wolverines are spread across a wide range of locations and connected habitats, affording protection to withstand catastrophic events. This statement conflicts with the best available science. There is not a wide range of wolverine populations. Wolverine populations in the contiguous United States are not well connected.

150. In the SSA, the Service says wolverines in the contiguous United States are resilient. This statement conflicts with the best available science. The wolverine population in the contiguous United States is likely less than 400. The effective population of wolverine in the United States is likely less than 50.

151. In the SSA, the Service says wolverines in the contiguous United States have sufficient representation. This statement conflicts with the best available science. The population of wolverines in the contiguous United States has a low amount of genetic diversity.

152. The SSA did not evaluate or analyze whether wolverines in the contiguous United States qualify as a DPS.

153. The SSA did not evaluate or analyze whether wolverines in the contiguous United States are "discrete" from wolverines in Canada.

The Service's 2020 withdrawal of the proposed listing rule

154. On October 13, 2020, the Service published its decision withdrawing the 2013 proposed rule to list wolverine in the contiguous United States as a threatened DPS.

155. The Service's 2020 withdrawal is premised on a new DPS finding. The Service's 2020 withdrawal is premised on the findings in the SSA and other sources.

156. In the 2020 withdrawal, the Service determined wolverines do not qualify as a DPS. The Service said wolverines in the contiguous United States are not discrete from wolverines in Canada. The Service said wolverines in the contiguous United States are not markedly separate from populations in Canada. The Service said there are not physical, physiological, ecological, genetic, or behavioral factors that

separate wolverines in the contiguous United States from wolverines in Canada. The Service said wolverine in the contiguous United States are not discrete based on the international boundary with Canada within which there are differences in control, management, conservation status, or regulatory mechanisms. There is no scientific support for these findings. These findings conflict with the best available science.

157. In the 2020 withdrawal, the Service used 38-50 years to define the "foreseeable future." This timeframe is not the foreseeable future. The Service said it used 38-50 years because "beyond this range, climate modeling uncertainty increases substantially." Climate modeling beyond 38-50 years is the best available science. McKelvey (2011) uses climate modeling beyond 38-50 years. The best available science on climate modeling and impacts to snowpack in the West goes beyond 38-50 years. The Service chose not to go beyond 38-50 years due to lack of time and resources. The Service decided not to go beyond 38-50 years because the results showed significant declines in snowpack in areas occupied by wolverine. Climate models that go beyond 38-50 years have no more uncertainty than climate models that only go out to 50 years.

158. In the 2020 withdrawal, the Service said it does not consider climate change and the projected changes in snowpack from increased temperature and changes in precipitation to be a threat to wolverines. There is no scientific support for this finding. This finding conflicts with the best available science.

159. In the 2020 withdrawal, the Services states that small population size and low genetic diversity is not a threat to wolverines. There is no scientific support for this finding. This finding conflicts with the best available science.

160. In the 2020 withdrawal, the Service stated that disturbance of wolverine and wolverine denning habitat due to winter recreational activity is not a threat. There is no scientific support for this finding. This finding conflicts with the best available science.

161. In the 2020 withdrawal, the Service states "there is recent evidence of wolverines traveling across the international border" and into the contiguous United States. In the 2020 withdrawal, the Service states that trapping near the Canada border does not act as a barrier to movement. There is no scientific support for this finding. This finding conflicts with the best available science.162. In the 2020 withdrawal,

the Service says recent dispersal of single male wolverines into California and Colorado and Utah provide evidence of connectivity and gene flow between subpopulations in the contiguous United States. There is no scientific support for this finding. This finding conflicts with the best available science.

163. In the 2020 withdrawal, the Service says there are no cumulative threats to wolverine in the contiguous United States. There is no scientific support for this finding. This finding conflicts with the best available science.

164. In the 2020 withdrawal, the Service says it does not know how many wolverines exist in the contiguous United States. The Service does not know how many wolverines exist in the contiguous United States. The best available science reveals less than 400 wolverines likely inhabit the contiguous United States. The Service estimates that the potential wolverine population capacity (based on habitat estimates alone) in the contiguous United States ranges from 506 to 1,881.

FIRST CAUSE OF ACTION
(Violation of the ESA – DPS finding)

165. Plaintiffs incorporate all preceding paragraphs.

166. The ESA authorizes the Service to list a species, subspecies, or DPS of a species. 16 U.S.C. § 1532 (16). The ESA does not define a DPS.

167. In 1996, the Service adopted a policy for defining when a population segment of a taxon qualifies as a DPS. 61 Fed. Reg. 4722 (February 7, 1996). To qualify as a DPS, a population segment must be: (1) discrete from other populations of the taxon; (2) significant to the taxon as a whole; and (3) qualify as either a threatened or endangered species. 61 Fed. Reg. at 4725.

168. A population segment is considered "discrete" if it satisfies one of two conditions: (a) it is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors; or (b) it is separated by international government boundaries within which there are differences in control and management of the species and its habitat that are significant in light of section 4(a)(1)(D) of the ESA (the threat

posed by the inadequacy of existing regulatory mechanisms). 61 Fed. Reg. at 4725.

169. The DPS policy's reference to "markedly" separated does not mean completely separated. The Service explains that the DPS policy does not require "complete separation" from other populations and "occasional interchange" does not undermine the discreteness of potential DPSs." 82 Fed. Reg. 30,502, 30,517 (June 30, 2017). The Service said that if "complete separation is required, the loss of the population has little significance to other populations." *Id*. The DPS policy states that the "discreteness" requirement does not require "absolute separation" because "this can rarely be demonstrated in nature for any population of organisms." 61 Fed. Reg. at 4,724. The DPS policy states that the standard for "discreteness" allows for "some limited interchange among population segments." *Id*.

170. The DPS policy explains that while use of international political boundaries as a measure of "discreteness" may introduce a non-biological or artificial element to the recognition of DPSs, it is nonetheless reasonable to do so when those national boundaries

"coincide with differences in the management, status, and exploitation of a species." 61 Fed. Reg. at 4,723.

171. The Service's 2020 withdrawal determined that wolverines in the contiguous United States do not qualify as a DPS. The Service determined wolverines are not "discrete" from wolverines in Canada. This is a substantial change from the 2013 proposed rule and 2014 withdrawal. This is not a logical outgrowth of the 2013 proposed rule or the 2014 withdrawal. The Service never subjected this decision to peer-review. The Service never subjected this decision to public review and comment. There is no rational connection between the Service's previous finding that wolverine in the contiguous United States qualify as a DPS and the Service's October, 2020 decision that they do not.

172. Wolverines in the contiguous United States qualify as a DPS. Wolverines in the contiguous United States are discrete from wolverines in Canada. Wolverine in the contiguous United States are "markedly separated" from wolverines in Canada as a consequence of physical, physiological, ecological, genetic, morphological, and behavioral factors. There is a genetic break between wolverines in the contiguous United States and wolverines in Canada. There are genetic

differences between wolverines in the contiguous United States and wolverines in Canada. Wolverines in the contiguous United States are separated from wolverines in Canada by an international governmental boundary within which there are differences in control of exploitation, management of habitat, conservation status, and regulatory mechanisms that are significant in light of section 4(a)(1)(D) of the ESA.

173. The Service's 2020 withdrawal decision that wolverines in the contiguous United States do not qualify as a DPS is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the DPS policy and ESA. 5 U.S.C. § 706 (2)(A).

SECOND CAUSE OF ACTION
(Violation of the ESA – five threat factors)

174. Plaintiffs incorporate all preceding paragraphs.

175. In evaluating whether a species qualifies for listing as a threatened or endangered species, the Service must determine whether a species is threatened by the following factors: (A) the present or threatened destruction, modification, or curtailment of the species' habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and (E) other natural or

man-made factors affecting the species' continued existence. 16 U.S.C. § 1533(a)(1). These five threat 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.

176. The Service's 2020 withdrawal does not carefully analyze and evaluate these five threat factors (individually and in the aggregate) in accordance with the ESA and the Service's implementing regulations and own policies. The Service failed to evaluate and analyze the threat from loss of habitat and range. The Service failed to carefully evaluate and analyze the threat to wolverines from climate change. The Service failed to carefully evaluate and analyze the threat from small population size (total and effective) and genetic threats, including low genetic diversity. The Service failed to carefully evaluate and analyze the threats from winter recreation. The Service failed to carefully evaluate and analyze the threat from human-caused mortality, including incidental trapping. The Service failed to carefully evaluate and analyze the threat from inadequate existing regulatory mechanisms. The Service failed to carefully evaluate and analyze cumulative threats.

177. The Service's 2020 withdrawal decision in the absence of undertaking a valid five-factor threats assessment is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the ESA. 5 U.S.C. § 706 (2)(A).

THIRD CAUSE OF ACTION
(Violation of the ESA – best available science)

178. Plaintiffs incorporate all preceding paragraphs.

179. Under section 4(b)(1)(A), 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 determinations "solely on the basis of the best scientific and commercial data available."

180. The Service's 2020 withdrawal is not premised on the best available science. The Service did not utilize the best available science on wolverines. The Service did not utilize the best available science on wolverine population numbers (actual and trend, total and effective), range, and wolverine movement. The Service misinterpreted and misapplied the best available science on climate change threats, genetic threats and the threat from small population size, winter recreation, and cumulative threats. The Service discarded the best available science and models on climate change and snowpack projections. The

Service insisted on more scientific certainty than the best available science can provide. The Service relied on a few select papers. The Service cherry-picked scientific information. The Service relied on wolverine studies from other, dissimilar habitats than those present in the contiguous United States. The Service did not consult and apply the most recent scientific papers on threats to wolverine and wolverine habitat, including new climate change papers projecting increases in snowpack losses. The Service did not consult and apply the most recent scientific papers on wolverine movements, connectivity, and trapping in southern Canada. Plaintiffs provided these studies to the Service sixty-days before filing this case.

181. The Service's decision and/or failure in its 2020 withdrawal to utilize the best available science on wolverines is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the ESA. 5 U.S.C. § 706 (2)(A).

FOURTH CAUSE OF ACTION
(Violation of the ESA – foreseeable future)

182. Plaintiffs incorporate all preceding paragraphs.

183. Under the ESA, the Service must evaluate whether a species, subspecies, or DPS qualifies as a threatened species, i.e., whether it is

likely to become endangered in the "foreseeable future" throughout all or a significant portion of its range. 16 U.S.C. §§ 1533(a)(1), 1532 (20); 50 C.F.R. § 424.11(d)(2).

184. The term "foreseeable future" is not defined in the ESA. In a 2009 Solicitor Memorandum (M-Opinion 37021), the Service says what constitutes the "foreseeable future" for a particular listing determination must be rooted in the best available data that allow predictions into the future. The "foreseeable future" extends only so far as those predictions are reliable. The M-Opinion states that reliable does not mean certain; it means sufficient to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the ESA. M-Opinion 37021 at 13.

185. In August, 2019, the Service promulgated new regulations defining the term "foreseeable future." 50 C.F.R. § 424.11(d). Under the new definition, the term "foreseeable future" only extends "so far into the future as the Services can reasonably determine that *both* the future threats and the species' responses to those threats are likely." 50 C.F.R. § 424.11(d).

186. The new definition of "foreseeable future" requires the Service to reasonably determine future threats to wolverines and how wolverines will respond to such future threats. The new definition of "foreseeable future" requires the Service to determine that future threats and the wolverines' response to such threats are probable.

187. The new definition of "foreseeable future" conflicts with the ESA. The new definition of "foreseeable future" differs from M-Opinion 37021. This new definition conflicts with M-Opinion 37021.

188. In deciding not to list wolverine, the Service utilized the new regulatory definition of "foreseeable future" in 50 C.F.R. § 424.11(d). The Service defined the "foreseeable future" as 38-50 years. In deciding not to list wolverine, the Service never evaluated threats beyond 38-50 years.

189. For wolverines, 38-50 years is not the foreseeable future. The foreseeable future for wolverine extends to 2100. The best available science allows the Service to predict current and future threats to wolverine and wolverine habitat (including threats from climate change and genetic threats) to at least 2100. The SSA evaluates threats to wolverine to 2100. The SSA evaluates threats to wolverine beyond 38-

50 years. The SSA considers 2100 to be within the foreseeable future. The IPCC evaluates climate change impacts and scenarios beyond 38-50 years. The best available science, including numerous scientific studies, evaluate climate change impacts and scenarios beyond 38-50 years.

190. The Service's decision not to list wolverine based on its identification of 38-50 years as the "foreseeable future" and its definition of "foreseeable future" is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the ESA. 5 U.S.C. § 706 (2)(A).

191. The new regulatory definition of "foreseeable future" in 50 C.F.R. § 424.11(d), as applied to the Service's 2020 withdrawal decision is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the ESA. 5 U.S.C. § 706 (2)(A).

FIFTH CAUSE OF ACTION
(Violation of the ESA –significant portion of its range)

192. Plaintiffs incorporate all preceding paragraphs

193. Under the ESA and the Service's implementing regulations, the Service must evaluate whether a species, subspecies, or DPS warrants listing if it is in danger of extinction or likely to become so

throughout all or "a significant portion of its range." 16 U.S.C. §§ 1533(a)(1), 1532(20).

194. The Service's 2020 withdrawal never evaluates and analyzes whether listing is warranted in a significant portion of the wolverine's range in the contiguous United States. The Service never evaluates whether certain portions of the wolverines' range in the contiguous United States are "significant." The Service never evaluates and analyzes threats to wolverines in certain (or significant) portions of its range in the contiguous United States. The best available science demonstrates threats to wolverines are concentrated in certain portions of the wolverine's range. The Service never identifies the "portions" it evaluated for significance or explains how they were determined and defined. The Service never evaluates and analyzes the ESA's five threat factors in the portions it purported analyzed (nor is such an analysis or evaluation in the SSA).

195. Wolverine are threatened in a significant portion of their range in the contiguous United States.

196. The Service's 2020 withdrawal decision in the absence of evaluating "significant portion of its range" is arbitrary, capricious, an

abuse of discretion, or otherwise not in accordance with the ESA. 5 U.S.C. § 706 (2)(A).

REQUEST FOR RELIEF

WHEREFORE, Plaintiffs respectfully request this Court:

A. Declare the Service has violated and continues to violate the law as alleged above;

B. Declare that the Service's October, 2020 decision not to list wolverine is arbitrary, capricious, an abuse of discretion, and not in accordance with the ESA;

C. Vacate the Service's October, 2020 withdrawal of the proposed listing rule;

D. Remand this matter back to the Service with instructions to comply with the ESA, as outlined herein and by this Court;

E. Award Plaintiffs their reasonable attorneys' fees, costs and expenses of litigation pursuant to section 11(g) of the ESA, 16 U.S.C. § 1540(g) and/or the Equal Access to Justice Act ("EAJA"), 28 U.S.C. § 2412;

F. Issue any other relief, including preliminary or permanent injunctive relief that Plaintiffs may subsequently request.

G. Issue any other relief this Court deems necessary, just, or proper.

Respectfully submitted this 14th day of December, 2020.

/s/ Matthew K. Bishop
Matthew K. Bishop

/s/ John Mellgren
John Mellgren, *application for PHV pending*

Counsel for Plaintiffs