

From: [Grizzle, Betty](#)
To: [John Guinotte](#)
Subject: M56 tracking information
Date: Wednesday, March 8, 2017 3:19:01 PM
Attachments: [WY Game and Fish Dept Comment Ltr Nov 2016.pdf](#)

John - So sorry to not provide this to you sooner, but am attaching the WY F&G Department comment letter we received in November. If you look at the last page, it provides a map (prepared by Bob Inman) that shows the track for M56 as it moved from WY into CO. It may or may be helpful for our range map.

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November 3, 2016

WER 9792.00e
United States Fish and Wildlife Service
Proposed rule; reopening of comment period
Endangered and Threatened Wildlife and Plants;
Proposed Rule for the North American Wolverine
Docket No. FWS-R6-ES-2016-0106

Public Comments Processing
Attn: FWS-R6-ES-2016-0106
U.S. Fish and Wildlife Service Headquarters, MS: BPHC
5275 Leesburg Pike
Falls Church, VA 22041-3803

Dear Sir/Madam:

Thank you for the opportunity to comment on the proposed rule to list the North American wolverine as threatened under the Endangered Species Act. Both the Wyoming Game and Fish Department (Department) and the Office of the Governor of Wyoming have provided previous comments on the proposed rule, the proposed 4(d) rule, proposed critical habitat, potential threats, and information on current (as of 2013) and historic distribution. In summary, we provided comments on:

- Current classification and protections in Wyoming by the Department, including the rationale for and implications of this classification.
- Concerns about the need for listing due to ability of wolverines to move large distances, whether the North American wolverine is discrete from other populations to the north, the need for more robust information regarding climate change and the potential ability of wolverines to adapt to these changes, and data suggesting wolverines may actually be expanding in recent decades.
- The understanding of wolverine presence and distribution in Wyoming, both historically and as recently as 2013, including results from forest carnivore studies conducted by the Department from 2005 to 2007.
- Concerns about the restrictiveness of the 4(d) rule in not including incidental take, grazing, energy development, and agriculture.

As these comments are already on file with the Service, the Department will focus these comments on work currently being conducted across the proposed DPS by the states of Wyoming, Idaho, Montana, Washington and several partners. This joint effort is known as the Western States Wolverine Conservation Project (WSWCP). Work is being conducted under the

auspices of the Western Association of Fish and Wildlife Agencies, Wildlife Chiefs Wolverine Subcommittee. Overarching goals for the Western States Wolverine Conservation Project include:

1. Implement a collaborative multi-state monitoring program to assess and establish a contemporary baseline on distribution, occupancy, and genetic characteristics of the metapopulation,
2. Maintain landscape connectivity among occupied, core wolverine habitats of the northern U.S. Rockies and north Cascades,
3. Develop policies that address the socio-political needs for assisting wolverine population expansion with translocations.

These goals relate directly to issues raised in the listing petition. Field work for goal one will be completed in April 2017. Genetic results, occupancy data analysis, connectivity modeling and final project reports will be available mid-year 2018. Policy work for assisting translocations is ongoing. When completed, these reports will be best available science within the proposed DPS. With the extended event horizon contemplated in the listing petition, any effort to move forward with a listing decision without the results of this ongoing work is premature.

The remainder of our comments will address the 9 areas of interest identified in the Federal Register Notice.

(1) Biological, commercial trade, or other relevant data concerning any threats (or lack thereof) to this species and regulations that may be addressing those threats.

The Department addressed these topics in previous letters.

(2) Additional information concerning the historical and current status, range, distribution, and population size of this species, including the locations of any additional populations of this species.

Wyoming Wolverine Occupancy Pilot Study

In 2015, the Department contracted with The Wolverine Initiative to conduct a pilot project to address questions pertaining to the status and distribution of wolverines in Wyoming. In order to detect wolverines, Inman et al. (2015; attached) overlaid predicted wolverine habitat in Wyoming with a grid composed of 15x15 km grid cells. They randomly selected 18 cells and deployed infrared cameras coupled with bait and scent lure from February through June. Specific camera locations within a cell were determined based upon accessibility, proximity to alpine tree line, and location of natural movement corridors. Over 1,618 survey days, Inman et al. (2015) collected 70,036 photos, including 8,213 photos of wolverines at 5 cells. Based on unique ventral pelage, ≥ 3 unique wolverines were detected at sites in the Gros Ventre, Wind River, and southern Absaroka Mountain Ranges. This represented the first confirmed wolverine

sighting from the Gros Ventre Mountain Range. From these detections, Inman et al. (2015) estimated occupancy at 62.9% throughout the study area, and a probability of detection of 32.1%. In addition to remote cameras, they also affixed barbed wire to bait trees in order to collect hair for genetic analyses. In all, 65 samples were collected, which resulted in genetic confirmation of wolverines at 2 cells where they had been documented on cameras.

WAFWA Western States Wolverine Conservation Project – Coordinated Occupancy Survey

Concurrent with this work, the Western Association of Fish and Wildlife Agencies developed a multi-state, multi-agency working group to identify and address issues pertaining to wolverine conservation and management in the contiguous U.S. The pilot project conducted in Wyoming (Inman et al. 2015) contributed to a multi-state effort among Wyoming, Idaho, Montana, and Washington to develop a coordinated multi-state monitoring strategy and define baseline wolverine distribution. The WGFD began implementing this monitoring strategy in Wyoming throughout the GYE and the Bighorn Mountains in the winter of 2015-2016. This first year targeted 25 grid cells in the southern half of the Wyoming-specific study area. Over 3,350 survey days, the Department collected 77,712 photos, including 1,406 photos of wolverines at 3 cells (Figure 1). Based on unique ventral pelage, ≥ 2 unique wolverines were detected at sites in the Wind River and southern Absaroka Mountain Ranges, including ≥ 1 individual that was detected in the pilot project. In addition to remote camera photos, the Department collected 60 genetic samples, which resulted in genetic confirmation of wolverines at 2 cells where they had been documented on cameras.

During the 2016-2017 winter 27 grid cells located throughout the northern half of the western mountains of Wyoming and the Bighorn Mountains will be completed. The other states participating in the WSWCP will also be conducting their surveys during this time and final results from all states will be available no later than mid-year 2018. Besides the 51 cells surveyed in Wyoming there will be 51 cells surveyed in Montana, 58 in Idaho, and 25 in Washington for a total of 185 cells.

(3) Any information on the biological or ecological requirements of the species, and ongoing conservation measures or efforts for the species and its habitat.

The WSWCP, under a contract with the University of Montana, is working to update and refine connectivity models in order to focus and prioritize habitat conservation and management. Importantly, our model will be capable of delineating source areas (used by resident adult wolverine) and estimating habitat quality between source areas. This will allow us to predict the areas that are most useful for essential dispersal and other inter-mountain range movements of wolverines out to 2050, including changes in habitat suitability due to climate factors and human land-use factors. Predictions will be made at three time intervals, 2015 (current), 2030 and 2050. Results of this effort will elucidate where habitat and important travel corridors and barriers exist for wolverines, thus allowing managers to proactively address barriers and conserve corridors to foster wolverine movement and achieve regional-level connectivity.

(4) Current or planned activities in the areas occupied by the species and possible impacts of these activities on this species.

The Department addressed these topics in previous letters.

(5) The reasons why we should or should not designate habitat as “critical habitat” under section 4 of the Act (16 U.S.C. 1531 *et seq.*) including whether and how the wolverine may benefit from such a designation; whether there are threats to the species from human activity, the degree to which it can be expected to increase due to a critical habitat designation, and whether that increase in threat outweighs the benefit of designation such that the designation of critical habitat may not be prudent.

The Department addressed these topics in previous letters.

(6) Specific information on the amount and distribution of wolverine habitat, including den sites.

See answer to Question 2.

(7) Specific information on the impacts of small population size and genetic diversity on the wolverine.

In addition to on-going monitoring and connectivity modeling efforts, a number of other questions are currently being addressed by the WSWCP. Currently, hair samples are being collected at occupancy camera stations. Hair samples are being analyzed to genetically verify species and if a wolverine, sex. DNA is being extracted from all wolverine hair samples and stored at the USFS Rocky Mountain Research Station, National Genomics Center for Wildlife and Fish Conservation in Missoula, MT. Depending on funding these samples could be further analyzed in order to answer additional conservation questions.

As this question is considered, we ask that the Service keep in mind that small population size for wolverine throughout the southern extent of their range is normal. Genetic diversity allows species to adapt to changing conditions. It is possible that the low diversity reported for wolverine within the four states is an artifact of the genetic makeup that can disperse to and be successful in habitats available at the southern extent of the species range (See Wisely et al. 2004 and Eckert et al. 2008). In addition, it is also important to note that although low genetic diversity can have negative effects on species and populations, this in and of itself does not necessarily constitute a large enough threat to lead to endangerment or extinction of species (see Caro and Laurenson 1994). Consequently, it will be important to evaluate the relative effect of this limited diversity on North American wolverines and determine whether it rises to the level of a threat to the persistence of the DPS as a whole.

Interestingly, from 2008 to 2012, long-distance movements of a male wolverine initially radio collared in Wyoming were documented. Wolverine M56 was initially trapped and collared on Togwotee Pass in western Wyoming in 2008. It was documented crossing the Red Desert in southwestern Wyoming, and located in the Shirley Mountains of central Wyoming before moving further south and settling in the northern half of the Rocky Mountains of Colorado. It remained there from 2009 to 2012, after which time the transmitter failed. Wolverine M56 was killed in North Dakota in early 2016; his route to this site is unknown (Figure 2). Although a single individual, these movements emphasize the ability of wolverines to travel long distances over atypical habitat in order to naturally settle in new areas and point out the larger need to maintain corridors dispersing individuals, particularly female wolverines, can move through. The states work on connectivity is detailed under Question 3.

(8) Information on the projected and reasonably likely impacts of climate change on the wolverine and its habitat, including the loss of snowpack and impacts to wolverine denning habitat.

We wish to again point out that listing wolverine will do nothing to mitigate any habitat change that may result from climate change, including any change to snow pack depth at denning sites. As pointed out in our previous comment letters to the Service, there remains many unknowns regarding the impact climate change may have on wolverines. However, listing this species as threatened, may hinder conservation efforts already underway for the North American wolverine.

Denning habitat for wolverines has been suggested to be dependent on persistent spring snowpack. However, this association requires additional research to determine if it is an obligate relationship or merely correlative. For example, recent work in Sweden (Aronsson and Persson 2016) and Alberta, Canada (Webb et al. 2016), call into question wolverine dependence on persistent spring snowpack. In Alberta, for example, persistent spring snowpack was not correlated with long-term wolverine harvest records in the boreal forest, where harvest was highest, and multiple female wolverines, including lactating females, were detected through remote camera surveys in areas predicted to have no spring snow cover at all (Webb et al. 2016). Similarly, in Sweden, wolverine populations have been expanding southward into the boreal forest and have colonized areas lacking persistent spring snow cover (Aronsson and Persson 2016). Both of these studies suggest the dependence of the species on persistent spring snowpack may not be as strict as originally suggested and highlight the need for a better understanding of the persistent spring snowpack requirement as well as the usefulness of the current models as predicting wolverine distribution and habitat based upon this variable alone.

Monitoring program results conducted during the winters of 2015/16 and 2016/17 may identify areas within current range states that are suitable for wolverines but currently unoccupied. For example, the front line of recovery from historical extirpation appears to lie somewhere within Wyoming. The results of our connectivity modeling may identify which of these un- or under-

occupied areas are more likely to be colonized by dispersing wolverines now and in the future. Even if survey results in current range states show that habitats therein are all occupied, extensive areas of suitable but unoccupied habitat exist in other states.

Translocation could be a prudent step for wolverine conservation if the logistics involved in a transplant of this type could be worked out. For example, current habitat-based estimates indicate that translocating wolverines into the unoccupied areas of the western U.S. could increase the number of wolverines in the contiguous states by >50% (Inman et al. 2013). However, regulatory uncertainty regarding future classification under ESA of any populations established via translocation is a major stumbling block to the states taking any action related to this proactive conservation measure. That is why the WAFWA Wildlife Chiefs Wolverine Subcommittee reached out to the Service formally via letter to Director Ashe on August 9, 2016 (attached). To quote from that letter:

“We believe there are mechanisms within the ESA that could provide regulatory assurances for proactive conservation efforts undertaken by states for species that rely on public land and, therefore, help prevent the need to list” (emphasis added).

We encourage the Service to help find a way forward on this initiative that could, if implemented, allow common sense conservation solutions to be considered for wolverine and likely other at risk species dependent on Federal lands.

(9) Additional provisions the Service may wish to consider to conserve, recover, and manage the proposed DPS of the North American wolverine occurring in the contiguous United States.

Given the large-scale efforts currently being conducted by state and federal agencies, tribal entities, universities, and others to provide the most comprehensive understanding of current distribution and status of wolverines as well as species-specific modeling efforts to address habitat change from climate and human activities and other potential threats, we request that the Service delay their final listing decision until these efforts are complete in order to utilize the best available science in their determination. We have attached the WSWCP NFWF Grant Application from August 2015 that provides additional information about the states work. Until this work is complete and concerns raised in previous comments are addressed, we cannot fully evaluate this proposal and therefore recommend to not list the North American wolverine as threatened.

November 3, 2016
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Sincerely,

A handwritten signature in black ink, appearing to read "Scott Smith", written in a cursive style.

Scott Smith
Deputy Director

SS/nb/bl

Enclosures:

- 1) Inman 2015 Report
- 2) WAFWA Letter to Director Ashe dated August 9, 2016
- 3) NFWF Grant Application Dated August 2015

cc: B. Nesvik, WGFD, Cheyenne
B. Lanka, WGFD, Cheyenne
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Literature cited:

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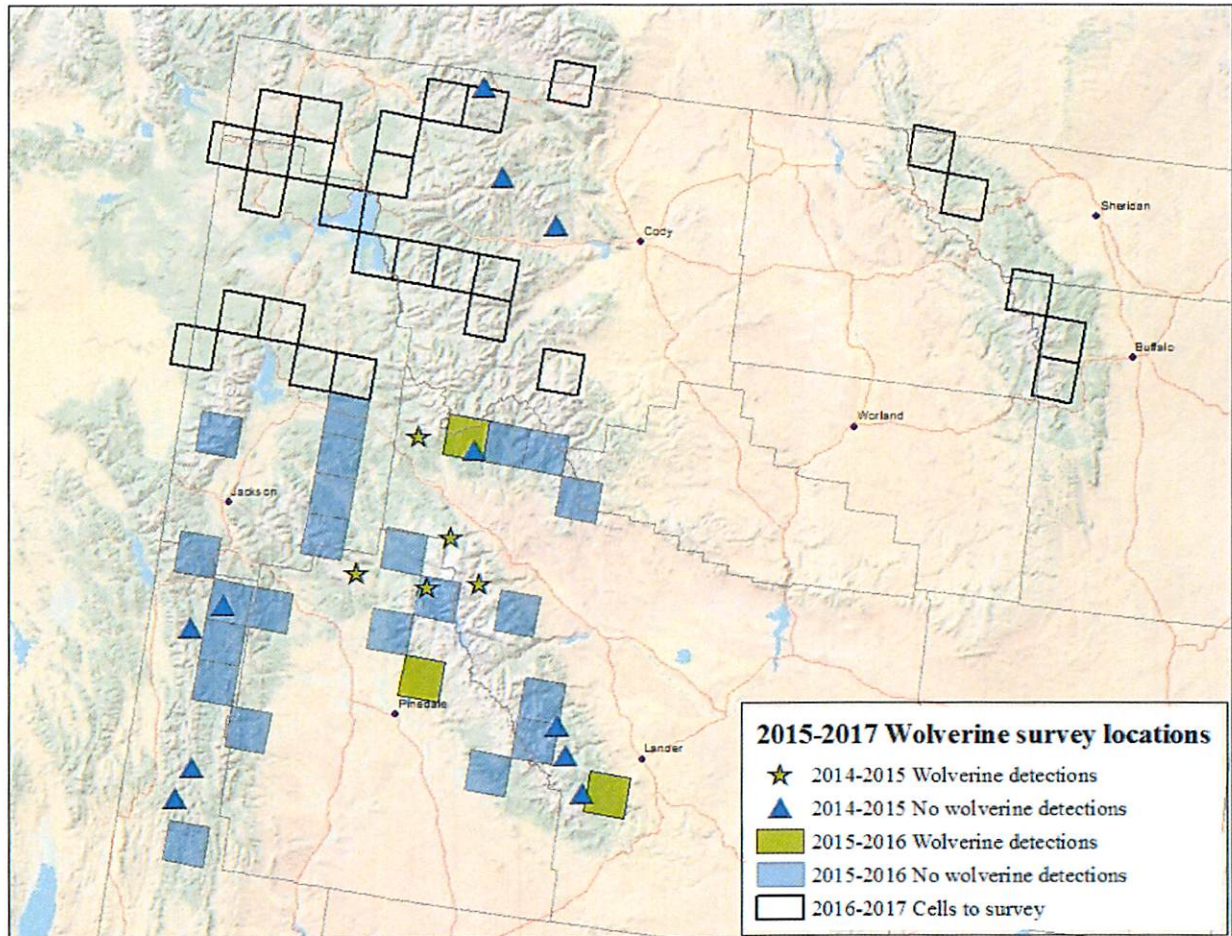


Figure 1. Grid cells selected for survey for wolverines (*Gulo gulo*) in western Wyoming as part of the multi-state monitoring strategy. Green grid cells are sites where wolverines were detected, and blue grid cells are sites where wolverines were not detected from December 2015 through March 2016; hollow grid cells will be surveyed from December 2016 through March 2017. For reference, green stars represent detections from the pilot project, and blue triangles represent non-detections from the pilot project (see Inman et al. [2015]).



Figure 2. Radio telemetry and observation locations of wolverine M56 from capture in 2008 to harvest in 2016. Figure provided by B. Inman (pers. obs.).