

From: [Shoemaker, Justin](#)
To: [Jodi Bush](#); [Grizzle, Betty](#); [Guinotte, John](#); [Stephen Torbit](#)
Subject: Revised RD memo for wolverine update briefing
Date: Wednesday, June 14, 2017 3:18:56 PM
Attachments: [Briefing Memo for RD Wolverine SSA update 06142017.docx](#)

Here's the version of the RD briefing memo that went to the RD today. There were a lot of edits from the RD's Chief of Staff, so I wanted to make sure you had the latest.

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BRIEFING MEMORANDUM FOR THE REGIONAL DIRECTOR

DATE: June 14, 2017

FROM: Michael Thabault, Assistant Regional Director, Ecological Services

SUBJECT: Wolverine Species Status Assessment Update

To inform the Regional Director of the progress made on the North American wolverine (wolverine) Species Status Assessment (SSA) Report and the key information that will be of interest to the eventual wolverine listing decision. A Regional Director briefing is scheduled for June 15.

BACKGROUND

In compliance with the April 4, 2016, Montana District Court's (Court) order that vacated our previous withdrawal of a proposed rule to list the contiguous U.S. Distinct Population Segment (DPS) of the wolverine (79 FR 47522; August 13, 2014), we will prepare either a revised proposed rule to list or a revised withdrawal of the previous proposed rule (78 FR 7864; February 4, 2013). On October 18, 2016 (81 FR 71670), we published a Federal Register notice that announced the vacature of the withdrawal rule, the proposed status reinstatement, and the reopening of the public comment period on the February 4, 2013, proposed rule to list the wolverine as a threatened species.

DISCUSSION

Court Order – Highlighted in the Court's order were the U. S. Fish and Wildlife Service's determinations regarding: (a) the threat posed to the wolverine by the effects of climate change at the reproductive denning scale, (b) the threat posed to the wolverine by small population size and lack of genetic diversity, and (c) application of the Significant Portion of its Range (SPR) Policy to the wolverine. In our SSA Report, we are reviewing previously considered and new information to address the Court's concerns and we are using the best available information upon which to base our listing decision.

Range of the Species – Based on both previously considered and new information, we have revised the wolverine range across the contiguous United States. The revised range is smaller than what was considered in previous rules.

Trapping Data – We have additional trapping data that were not available to us in 2014, which we are using to inform the species' range and trapping impacts in Canada (British Columbia and Alberta).

National Oceanic and Atmospheric Administration and University of Colorado Snow Persistence Model – High resolution snow pack models have been developed for Glacier and Rocky Mountain National Parks. These areas bracket the DPS range for the wolverine in the contiguous United States. Most model scenarios indicate significant future snow persistence through April

and May for 1) elevations currently used for denning in Glacier National Park and 2) the inferred elevations where wolverines would be expected to den in Rocky Mountain National Park.

New denning information – We have received new information on wolverine research that was not available to us in 2014, including several peer-reviewed publications. This new information provides additional insights into the timing and location of wolverine den sites such as documentation of natal den sites in locations outside of areas previously predicted by Copeland et al.'s (2010) snow model in North America and in Scandinavia.

Population Viability Analysis (PVA) – We are coordinating with the United States Geological Survey to develop a PVA to inform minimum viable population size and to develop future scenarios that model the potential effects of demographic and habitat parameters on the wolverine's population in the contiguous United States.

Genetics – Regarding our 2014 withdrawal, the Court stated that we failed to articulate how our statements regarding the following did not constitute adverse effects to wolverine:

- Apparent loss of connectivity between Rocky Mountains and Canada prevented influx of genetic material needed to maintain or increase the genetic diversity in the contiguous United States.
- Effective population size is too low to support the subpopulations in the contiguous United States.
- Genetic drift has already occurred in subpopulations in the contiguous United States as compared to Canada, and a continued loss of genetic diversity may lead to inbreeding depression and inability of wolverines to persist in the contiguous United States.

To address these concerns, we need to reevaluate these genetic issues. As such, we need to determine whether there is a threat for inbreeding depression based on small population size. In addition, knowledge gained through a more thorough and complete analysis of the genetic structure of wolverine populations throughout North America would better inform our listing determination.

NEXT STEPS

We plan to present the final SSA Report, with peer and partner review incorporated, to the RD and decision team by December 2017.

ATTACHMENTS

See attached for a schedule outlining steps and timelines for preparation of the SSA Report and listing decision documents.