

From: [Nelson, Marjorie](#)
To: [Shoemaker, Justin](#)
Cc: [Jodi Bush](#); [Grizzle, Betty](#); [Guinotte, John](#); [Craig Hansen](#); [Caitlin Snyder](#)
Subject: Re: Wolverine briefing memo for RD
Date: Friday, June 9, 2017 1:46:36 PM
Attachments: [Briefing Memo for RD Wolverine SSA update_06092017_MN.docx](#)

Just the one comment pending Mike's review of the options paper.

Marjorie Nelson
Chief, Division of Ecological Services
Mountain-Prairie Region
U.S. Fish and Wildlife Service
DIFFERENT NUMBER UNTIL 6TH FLOOR FIXED
720-582-3524

On Fri, Jun 9, 2017 at 8:45 AM, Shoemaker, Justin <justin_shoemaker@fws.gov> wrote:
Jodi and Marj,

We have prepared a briefing memo for our wolverine SSA update for the RD next Thursday. This memo needs to be to the RD's office by Monday per R6 RD briefing guidance from Stephanie Potter. Please take a look and let me know if you have edits. We will be quickly circulating a surname folder through RO ES for Mike's signature on Monday.

We are trying to put together a genetics options paper as Mike requested. It can be an attachment to this memo if we get the necessary info regarding costs by Monday. Steve is looking into it. If not, I'll drop reference to the options paper in this memo but leave the topic for discussion.

We can also attach the revised schedule to the RD memo if you think appropriate. The latest draft is attached.

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BRIEFING MEMORANDUM FOR THE REGIONAL DIRECTOR

DATE: June 9, 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 wolverine Species Status Assessment (SSA) and the key information that will be of interest to the eventual wolverine listing decision. Briefing scheduled for June 15.

BACKGROUND

In compliance with a Court order that remanded 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). In October 2016, we published a notice to announce the vacature of the withdrawal rule to the public, announce the proposed status since the judge's ruling, and to reopen the public comment period on the February 4, 2013 proposed rule to list the wolverine as a threatened species.

DISCUSSION

Highlighted in Judge Christensen's Court order remanding the withdrawal were the 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 SPR Policy to the wolverine. In our SSA we are making every effort to inform these points and ensure we are using the most up-to-date science upon which to base our listing decision.

Range of the species – Our current approach to delineating wolverine range in the lower 48 is different, and we believe more accurate, than the broader range considered in the 2014 withdrawal.

Trapping Data – We have gathered additional trapping data not available to us in 2014 to inform the range of the species and the effect of trapping in Canada (British Columbia and Alberta) as it relates to an updated DPS determination.

NOAA/CU snow persistence model – High resolution snow pack models have been developed for Glacier and Rocky Mountain National Parks. These areas bracket the DPS range in the lower 48. The majority of model scenarios indicate significant future snow persistence through April and May for elevations currently used for denning (Glacier) and the inferred elevations where wolverines would be expected to den in Rocky Mountain National Park.

New denning information – We have several records that were not available to us in 2014 of den sites found outside of modeled snow habitat in North America, as well as confirmation of successful wolverine dens outside of snow in Scandinavia.

PVA underway – We are coordinating with USGS on a PVA to inform minimum viable population size and the effects of demographic and habitat parameters on the wolverine population in the lower 48 States.

Genetics – The court said that, in our 2014 withdrawal, 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 contiguous U.S.
- Effective population size is too low to support the subpopulations in contiguous U.S.
- Genetic drift has already occurred in subpopulations in contiguous U.S. as compared to Canada, and a continued loss of genetic diversity may lead to inbreeding depression and inability of wolverines in contiguous U.S. to persist

Thus, we need to evaluate our statements in previous rules that there is “good evidence” that genetic diversity is lower in wolverines in the contiguous U.S. as compared to Canada and Alaska. We also need to determine whether there is a threat for inbreeding depression based on small population. In addition to informing these points, knowledge gained through a more thorough and complete comparison of the genetic structure of wolverine population in the contiguous U.S. as well as Alaska and Canada would provide a more legally and scientifically robust basis on which to base our DPS determination.

See attached options paper.

Commented [NM1]: Let's have the options paper get Mike's review before inserting.

NEXT STEPS

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

ATTACHMENTS

Wolverine SSA and listing decision schedule attached.

Genetics options paper.