

From: [Guinotte, John](#)
To: [Nelson, Marjorie](#)
Cc: [Craig Hansen](#); [Justin Shoemaker/R6/FWS/DOI](#); [Jodi Bush](#)
Subject: Re: thoughts on wolverine genetic work
Date: Thursday, May 4, 2017 10:00:25 AM

Hi Marj,

Here are a few draft genetic questions Betty sent along a couple of days ago.

Here are some key questions I developed after reviewing previous rules. **Feel free to edit these and/or provide others.**
I would like to send these to AK researchers.
Thanks.

(1a) Do genetic studies indicate that there is a loss of connectivity between wolverines in the northern Rocky Mountains (or the Cascades region) and Canada?

(1b) Relatedly, how does immigration of wolverines from Canada influence the genetic diversity of wolverines in the contiguous United States?

(2a) Does the contiguous U.S. population of wolverines exhibit a reduction in genetic diversity?

(2b) Relatedly, is there evidence of genetic drift in wolverines in the contiguous US population?

(2c) If either (2a) or (2b) are true, what, if any, "adverse effects" have been documented in the US population of wolverines?

(3) What is the "effective population size" of wolverines in contiguous United States, AND across it's entire North American range?

Best, John

On Thu, May 4, 2017 at 9:35 AM, Nelson, Marjorie <marjorie_nelson@fws.gov> wrote:

Craig and Justin,

I know you're about to head to the ULT training next week. If it is at all possible to squeeze in a discussion on the genetics project, I would appreciate it. I understand the estimate is now about \$50k and I would like your thoughts on whether it is worth it (also knowing that we could spend up to that much on peer review). I know that the information would be useful but its a good chunk of change when we don't need to create new information, just use best available.

thanks,

Marj

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