

From: [Grizzle, Betty](#)
To: [Wenburg, John](#)
Cc: [Jeffrey Olsen](#)
Subject: Re: Wolverine genetics
Date: Friday, March 24, 2017 3:07:21 PM

Yes, I am here until about 3:45 pm PST.

On Fri, Mar 24, 2017 at 1:11 PM, Wenburg, John <john_wenburg@fws.gov> wrote:

My apologies, Betty. This fell through the cracks. Jeff and I thought it would be best for the three of us to talk - we are not quite sure what you need from us. Do you have time today?

John

On Fri, Mar 24, 2017 at 12:08 PM, Grizzle, Betty <betty_grizzle@fws.gov> wrote:

Hi John - Just checking back in with you. Have you had a chance to read over the short summary I provided? Any questions?

Thanks,
Betty

On Mon, Mar 20, 2017 at 11:33 AM, Wenburg, John <john_wenburg@fws.gov> wrote:

Hi Betty,

Sorry for the delay. I was out of the office. Let me look this over and talk to Jeff and get back to you soon.

Thanks,

John

On Fri, Mar 17, 2017 at 8:42 AM, Grizzle, Betty <betty_grizzle@fws.gov> wrote:

Jeff and John - I am attaching a document I prepared for Region 6, outlining information needs for our listing determination. In short, there are two main needs:

- 1) understanding the genetic diversity and population genetic structure of wolverine in North America (with two options, the SNPs method being more robust)
- 2) developing a revised effective population size estimate for lower 48 US wolverine population, and possibly for Canada/Alaska, in the context of "small population size" as a potential threat to wolverine.

Addressing both of these needs will also inform our DPS analysis and I understand you have evaluated other species in the context of our DPS Policy.

The Regional Office has asked me to provide a time frame and potential costs for this effort. I understand that the quickest path forward would be to request the completed analyses from Rocky Mountain Research Station and evaluate those data rather than request their samples and run new analyses.

Let me know if you have any questions. Very much appreciate your assistance with this listing process.

Betty

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