

From: [Guinotte, John](#)
To: [Betty Grizzle](#)
Subject: Fwd: BC wolv trapping map
Date: Thursday, December 21, 2017 1:49:04 PM
Attachments: [BC_gulo_harvest_300km.cpg](#)
[BC_gulo_harvest_300km.dbf](#)
[BC_gulo_harvest_300km.prj](#)
[BC_gulo_harvest_300km.sbn](#)
[BC_gulo_harvest_300km.sbx](#)
[BC_gulo_harvest_300km.shp](#)
[BC_gulo_harvest_300km.shx](#)

John Guinotte
Spatial Ecologist
Ecological Services
U.S. Fish and Wildlife Service
Mountain Prairie Region 6
134 Union Blvd., Lakewood, CO 80228
303-236-4264
john_guinotte@fws.gov

----- Forwarded message -----

From: Weir, Rich ENV:EX <Rich.Weir@gov.bc.ca>
Date: Thu, Aug 17, 2017 at 11:05 AM
Subject: RE: BC wolv trapping map
To: "Guinotte, John" <john_guinotte@fws.gov>

Here is the data for MUs that are within 300 km of the border with the US. Note that there a number of MUs that don't have any harvest, which are the holes (zeros) in the harvest layer that you noted before.

Rich

Richard D. Weir, R.P.Bio. | Carnivore Conservation Specialist
Ecosystems Branch, Ministry of Environment and Climate Change Strategy
PO Box 9338 Stn Prov Govt | 4th Floor, 2975 Jutland Road
Victoria, BC | V8W 9M1 | New phone: 778.698.4390

From: Guinotte, John [mailto:john_guinotte@fws.gov]
Sent: Thursday, August 17, 2017 08:57
To: Grizzle, Betty; Weir, Rich ENV:EX
Subject: Re: BC wolv trapping map

Hi Rich,

I had a look at the original data you sent me, the shapefile of management units, and it looks like the management units you write about below were not included (see attachment). Is it possible to get an updated shapefile with those units included? We'd ideally like to have historical harvest data for all the units in close proximity (200 km) to the international border. This is important information regarding distinct population segment and the analysis we are doing.

Many thanks

John

John Guinotte
Spatial Ecologist

Ecological Services
U.S. Fish and Wildlife Service
Mountain Prairie Region 6

134 Union Blvd., Lakewood, CO 80228

303-236-4264
john_guinotte@fws.gov

On Wed, Aug 16, 2017 at 4:01 PM, Grizzle, Betty <betty_grizzle@fws.gov> wrote:

----- Forwarded message -----

From: **Weir, Rich ENV:EX** <Rich.Weir@gov.bc.ca>

Date: Wed, Aug 16, 2017 at 2:20 PM

Subject: RE: BC wolv trapping map

To: "Grizzle, Betty" <betty_grizzle@fws.gov>

Hi Betty,

To answer your questions:

- 1) According to my number, yes the harvest of wolverines in that MU (5-12) was 25 individuals. I probably didn't send the data from the other MUs nearby – the MU immediately to the east had a harvest during that period of 40 individuals. Other MUs nearby had similar or higher harvest totals, so the number isn't unexpected. I think the map might be misleading simply because the surrounding (and more northerly) MUs are not shown.
- 2) We haven't delved into the genetics work enough to be able to say anything about movement patterns of wolverines. Probably the best information on movement near the border is from Keith Aubry and Cathy Raley's work in the North Cascades. You could also talk to Garth Mowat – he is doing some finer scale gene flow analysis in the Columbia Mountains that might be useful.

Cheers,

Rich

Richard D. Weir, R.P.Bio. | Carnivore Conservation Specialist

Ecosystems Branch, Ministry of Environment and Climate Change Strategy

PO Box 9338 Stn Prov Govt | 4th Floor, 2975 Jutland Road

Victoria, BC | V8W 9M1 | New phone: 778.698.4390

From: Grizzle, Betty [mailto:betty_grizzle@fws.gov]

Sent: Wednesday, August 2, 2017 07:49

To: Weir, Rich ENV:EX

Subject: Fwd: BC wolv trapping map

Hi Rich - I had a couple of questions after reviewing the map (*see attached*) that John Guinotte prepared from the data you sent to him.

1. Can you tell me why one management unit in BC has such a higher number? This is the unit with red color, labeled as 23 wolverines harvested over that time period. Is this due to higher level of trapping effort in that region, better wolverine habitat, or combination of factors?

2. Do you have a general sense, based on your on-going genetic analyses or other studies, as to the movement patterns of wolverines along this portion of the U.S.-Canada border? Do wolverines seem to be dispersing (or moving within home ranges) in both directions across the border?

Thanks for your time. Feel free to call me to discuss if that's easier.

Betty

----- Forwarded message -----

From: **Guinotte, John** <john_guinotte@fws.gov>

Date: Mon, Jun 5, 2017 at 3:51 PM

Subject: BC wolv trapping map

Hi All,

Attached is a quick map I made to show total number of wolverines trapped in BC by management unit (2007-2015). This is the data from Rich Weir.

Best, John

John Guinotte
Fish and Wildlife Biologist

Ecological Services
U.S. Fish and Wildlife Service
Mountain Prairie Region 6

134 Union Blvd., Lakewood, CO 80228

john_guinotte@fws.gov

--

Betty J. Grizzle, D.Env.

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

Carlsbad Fish and Wildlife Office

2177 Salk Ave, Suite 250

Carlsbad, CA 92008

760-431-9440, ext. 215

760-431-5901 fax

--

Betty J. Grizzle, D.Env.

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

Carlsbad Fish and Wildlife Office

2177 Salk Ave, Suite 250

Carlsbad, CA 92008

760-431-9440, ext. 215

760-431-5901 fax

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.cpg (5 Bytes) cannot be converted to PDF format.

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.dbf (62039 Bytes) cannot be converted to PDF format.

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.prj (466 Bytes) cannot be converted to PDF format.

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.sbn (1460 Bytes) cannot be converted to PDF format.

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.sbx (260 Bytes) cannot be converted to PDF format.

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.shp (1588204 Bytes) cannot be converted to PDF format.

Attachment 20171221 134904_EM_Fwd_ BC wolv trapping map.shx (1068 Bytes) cannot be converted to PDF format.