

From: [Guinotte, John](#)
To: [Joseph Barsugli - NOAA Affiliate](#)
Cc: [Stephen Torbit](#); [Andrea Ray](#)
Subject: Re: Fwd: avalanche chute database for CO
Date: Tuesday, January 17, 2017 1:13:58 PM
Attachments: [potential avalanche area.pptx](#)

Hi All, Attached are a couple of maps showing the slopes > 25 deg. As you can see these areas cover a significant portion of our study areas. This was calculated using a 10m DEM.

Best, John

John Guinotte
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On Tue, Jan 17, 2017 at 11:41 AM, Joe Barsugli <joseph.barsugli@noaa.gov> wrote:

I was wondering whether some simple GIS routine would be adequate, since at least in Glacier (their map of the Railroad corridor) the avalanche terrain covered a surprising fraction of the terrain. Would probably be best to use the hi-res DEM for this, not the 250m pixels. Joe

On 1/17/2017 9:18 AM, Guinotte, John wrote:

Dear All,

I did some digging around this am to try to obtain avalanche chute info for our study areas. I spoke to Mike below and Doug Scott from avalanchemapping.org. Short story is remote areas are not well populated with data for chutes. Doug said DOTs, railroads, ski areas, military (Afghanistan) etc are the ones who pay to have this work done. Mike is going to send us what they have for RMNP (I sent him our shapefiles). He said we could stop by tomorrow if we want.

Doug said to do this right we'd need to overlay the DEMs with multiple sources of historical imagery to id chutes in the study areas and it is time consuming. He did say a quick way to ID would be to map areas > 20 deg slope, but it may not be very accurate. I could take a shot at this and see what we get. Lets talk about this tomorrow.

Best, John

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

From: **Cooperstein - DNR, Mike** <mike.cooperstein@state.co.us>

Date: Tue, Jan 17, 2017 at 8:46 AM
Subject: Re: avalanche chute database for CO
To: "Guinotte, John" <john_guinotte@fws.gov>
Cc: "Logan, Spencer" <spencer.logan@state.co.us>

John:

Sure we will do what we can. Spencer Logan will be in the office tomorrow so feel free to stop in. We are in the NWS office on the third floor room 3C 509. Just open the door and come on in. I'll check to see if we have any defined avalanche paths in the study area this afternoon, but like I said, most of our defined paths are along transportation corridors or ski areas.

Coop

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On Tue, Jan 17, 2017 at 8:37 AM, Guinotte, John <john_guinotte@fws.gov> wrote:

Hi Mike,

I appreciate you helping us here. We are working with NOAA/CU to develop predictive snow pack models for areas surrounding Rocky Mountain National Park and Glacier National Park. This effort is meant to help inform the species status assessment for the wolverine across its range. Wolverines den in avalanche chutes and we'd like to have a database of known chutes in our study areas so we can take a closer look at these areas with respect to future snow projections. I've attached two shapefiles with both of our study areas.

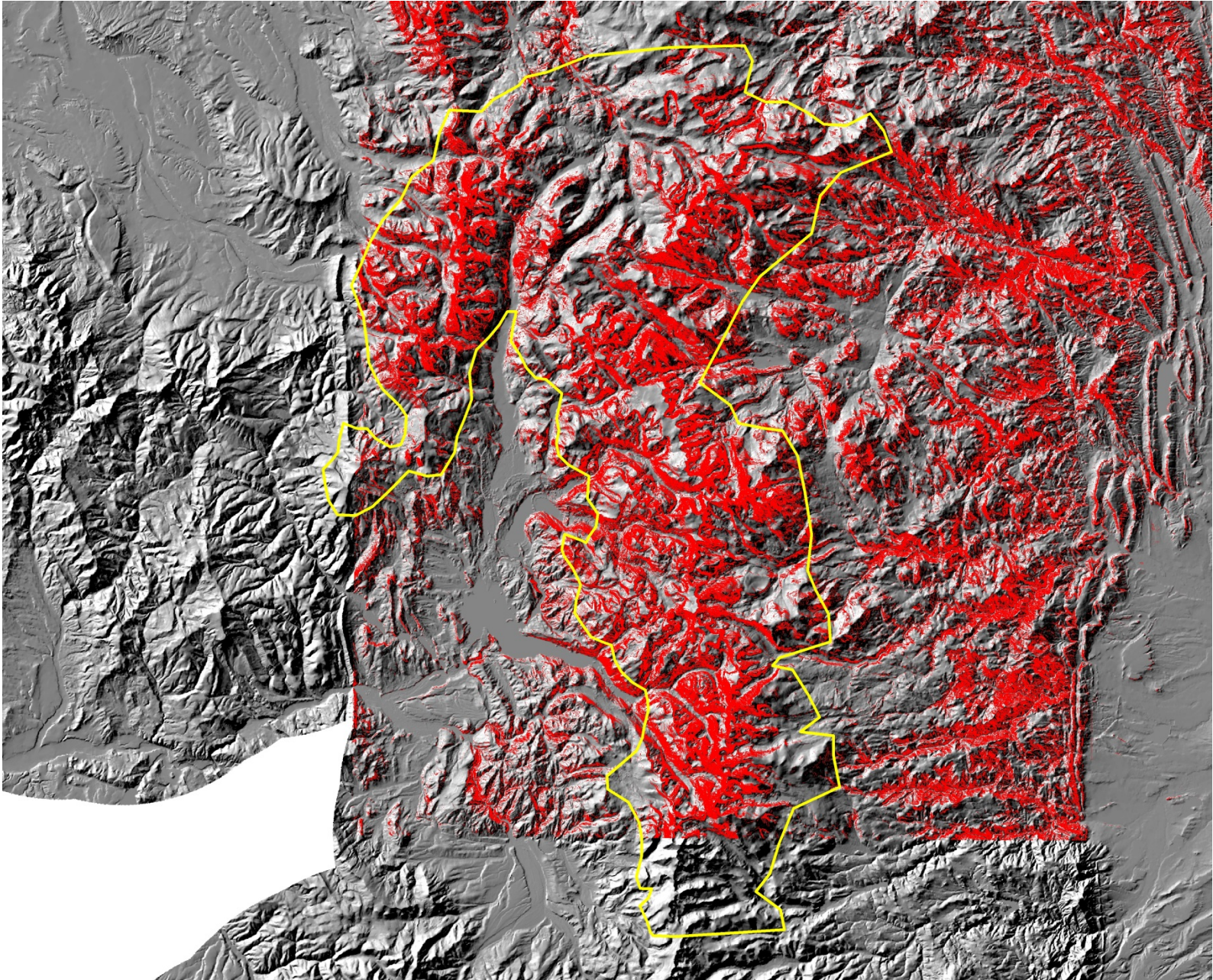
Many thanks,
John

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PSD Science Board and
Attribution and Predictability Assessments Team Member

RMNP potential avalanche area: slope > 25 deg (10m DEM)



Glacier NP potential avalanche area: slope > 25 deg (10m DEM)

