

## **GNFAC Avalanche Advisory for Sun Jan 4, 2015**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, January 4, at 7:30 a.m. Today's advisory is sponsored by [Montana Ale Works](#) in partnership with the Friends of the Avalanche Center. This advisory does not apply to operating ski areas.

### Mountain Weather

Overnight the Bridger Range picked up four inches of new snow. The rest of the advisory area picked up 1-3 inches. This morning, temperatures range from the single digits to low teens F and winds are light out of the W-NW. Today, an unsettled northwest flow will continue to produce light showers over much of the area with an additional 2-4 inches possible by this afternoon. Temperatures will warm into the upper teens F and winds will remain light to moderate out of the W-NW. A more potent storm system arrives tonight bringing with it heavier snow and stronger winds. The mountains near Bozeman and Big Sky could see 3-5 inches tonight while the mountains around West Yellowstone and Cooke City could pick 6-8 inches. Snow will continue through the day tomorrow.

### Snowpack and Avalanche Discussion

#### Bridger Range

The Bridger Range has received nearly eighteen inches of new snow over the past thirty six hours totaling 1.4 inches of SWE (snow water equivalent). The primary concern today will be avalanches failing on the new snow – old snow interface. A few days of cold-clear weather prior to the storm may have created a layer of surface hoar or near surface facets that is now capped by the new snow. We are not sure if this layer is widespread in the Bridger Range, but the fact it exists in many other areas is an indicator it may also exist here.

Obvious signs of instability such as cracking/collapsing and recent avalanche activity are bull's eye information an unstable snowpack structure exists. It will certainly be worth digging a few quick snowpits to assess this layer before riding on any slope steeper than 30 degrees. Skiers and riders should be extra cautious around any slope that has received a wind load. This problem will be confined to upper elevation, leeward terrain below the ridelines.

Today, lots of new snow makes human triggered avalanches likely and the avalanche danger is rated **CONSIDERABLE**.

#### Gallatin Range Madison Range Lionhead area near West Yellowstone Cooke City

Over the past thirty six hours the mountains south of Bozeman received 5-7 inches of new snow totaling .3 to .5 inches of SWE. This new snow is the low density, cold smoke variety which will make it easily transported by the wind. This makes wind slabs today's primary avalanche concern in the mountains south of Bozeman ([photo](#)).

Yesterday, a snowmobiler triggered a wind slab near Lulu Pass outside of Cooke City. The slide was relatively small and the rider was able to avoid being caught. With more snow and wind in the forecast, wind slabs have the potential to grow in size and distribution throughout the day. Wind deposited snow may be resting over a layer of surface hoar which will make any wind loaded slope especially sensitive to human triggers.

Slopes that have not received a wind load won't be as problematic due to the lack of a cohesive slab. Yesterday, a group of skiers in Beehive Basin north of Big Sky found the new snow resting over a layer of surface hoar, but they could not get this layer to propagate in stability tests. This will likely change as more snow accumulates over the next twenty four hours ([video](#), [photo](#)).

Today, human triggered avalanches are likely on wind loaded slopes which have a **CONSIDERABLE** avalanche danger. Non-wind loaded slopes have a **MODERATE** avalanche danger. The avalanche danger could rise on all slopes today if snow and wind arrive earlier and heavier than forecasted. Pay close attention to changing conditions and don't afraid to change plans if instability is on the rise.

### **Two New Articles Posted:**

Read Doug's article on **"Human-Factors and Digging"** and also Mark's companion article titled **"A survey of our class at MSU"**.

I will issue the next advisory tomorrow morning at 7:30 a.m. If you have any snowpack or avalanche observations drop us a line at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com) or call us at 587-6984.

### **AVALANCHE EDUATION and EVENTS**

Take a look at our **Education Calendar** for all our classes being offered.

**1-hour Avalanche Awareness for Snowmobilers**, Cooke City, 6:30-8 p.m., Monday, January 5, Cooke City Community Center.

**1-hour Avalanche Awareness for Snowmobilers**, Billings, 6:30-8 p.m., Wednesday, January 7 at Hi-Tech Motor Sports.

**Companion Rescue Clinic**, Bozeman, Fri eve and Sat field, January 9 and 10, REI. Register for the class here: [www.rei.com/stores/bozeman.html](http://www.rei.com/stores/bozeman.html)

**1-hour Avalanche Awareness for Snowmobilers**, West Yellowstone, 7 p.m., Saturday, January 10, Holiday Inn.

**1-hour Avalanche Awareness**, Three Forks, 7 p.m., Monday, January 12, Methodist Church Annex.

**Women's Avalanche Awareness w/ Beacon Practice**, Bozeman, 6:30- 8 p.m., Tuesday, January 13, Beal Park.

**1-hour Avalanche Awareness**, 4 Corners, 6:30 p.m., Wednesday, January 14, GVSA Groomer Shed.

**1- hour Sidecountry Avalanche Awareness**, Bozeman, 6:30-8 p.m., Wednesday, January 14, REI.