

## **GNFAC Avalanche Advisory for Sat Dec 31, 2016**

Good Morning and happy New Year's Eve. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Saturday, December 31<sup>th</sup> at 7:00 a.m. Today's advisory is sponsored by **Javaman** and [Buck Products](#). This advisory does not apply to operating ski areas.

### Mountain Weather

Since noon yesterday, the mountains around Bozeman and Big Sky received 6-8" of new snow. The mountains near West Yellowstone and Cooke City picked up 2-4". At 5 a.m. skies have started to clear and temperatures have dropped into the single digits above zero F. Winds are blowing 20-40 mph out of the W-NW in the Bridger Range and 15-30 mph out of the W-SW elsewhere. Today, a break in the weather will produce sunny skies and warmer temps. Highs will climb into the upper teens to low 20s F and winds will continue to blow 15-30 mph out of the W-SW. Skies will become increasingly cloudy by this evening as another storm approaches. No accumulation is expected tonight, but widespread snow showers will impact the area tomorrow afternoon into Monday.

### Snowpack and Avalanche Discussion

Madison Range   Southern Gallatin Range

Lionhead area near West Yellowstone   Cooke City

There's a high level of spatial variability in the snowpack. Some slopes are stable while others are not. The most significant factor creating unstable conditions is wind deposited snow. Earlier in the week, strong winds out of the W-SW formed dense wind drifts on leeward slopes. These drifts added a substantial amount of weight to facets near the ground ([video](#)). This setup recently produced large natural avalanches in the mountains around Cooke City ([photo](#), [photo](#)). Alex observed numerous slides in that area over the past few days and has stayed off slopes steeper than 35 degrees.

New snow and wind over the past 24 hours likely developed fresh wind slabs that will be touchy to human triggers today. Slides originating in the new snow have the potential to step down to weak snow near the ground. The safe bet today will be avoid all wind loaded slopes.

Areas that have not been wind loaded have better stability. On Thursday, I skied in Beehive Basin and felt comfortable skiing slopes up to 35 degrees in non-wind loaded terrain ([video](#)). Karl Birkeland found similar conditions near Hebgan Lake yesterday.

Today, dangerous avalanche conditions exist on wind loaded slopes which have a [CONSIDERABLE](#) avalanche danger. Non-wind loaded slopes have a [MODERATE](#) avalanche danger.

Bridger Range   Northern Gallatin Range

The main avalanche concern in the Bridger Range and northern Gallatin Range will be fresh wind slabs. Since yesterday, these areas picked up 6-8" of new snow totaling .3-.4" of SWE. I don't expect this storm to be enough to tip the scales and produce widespread avalanche activity. However, the combination of new snow and wind will likely make fresh wind slabs touchy to human triggers today.

Most avalanche activity should stay confined to the new snow, but there is potential for slides to step down to weak snow near the ground. Yesterday, I ventured onto the Football Field south of Bridger Bowl and found firm, wind-blown snow sitting over depth hoar at the ground ([video](#)). The snowpack was shallow and non-reactive in stability tests, but I still avoided steeper terrain due to the poor structure.

Today, new snow and wind make human triggered avalanches likely on wind loaded slopes which have a **CONSIDERABLE** avalanche danger. Non-wind loaded slopes have a **MODERATE** avalanche danger.

Alex will issue the next advisory tomorrow morning by 7:30 a.m.

We rely on your field observations. Send us an email with simple weather and snowpack information along the lines of what you might share with your friends: How much new snow? Was the skiing/riding any good? Did you see any avalanches or signs of instability? Was snow blowing at the ridgelines? If you have snowpit or test data we'll take that too, but this core info is super helpful! Email us at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com) or leave a message at 406-587-6984.

### **Upcoming Events and Education**

**Month of January:** Montana Ale Works has chosen the Friends of the Avalanche Center as January's "Round It Up America" recipient. Every time you round-up your bill the change gets donated to the Friends. Pennies equal dollars!

### **BOZEMAN**

**Tuesday, January 17, Avalanche Center Forecaster's Social at Montana Ale Works.** A small-plate fare and beer tasting **fundraiser for the Friends:** \$40.00/person; 2 seatings (5:30 p.m. and 7:00 p.m). Get your tickets **[HERE](#)**.

### **COOKE CITY**

**Weekly rescue training and snowpack update,** 6-7:30 p.m., Soda Butte Lodge on Friday, Field location Saturday TBA.