

## **GNFAC Avalanche Advisory for Thu Jan 31, 2013**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, January 31 at 7:30 a.m. **Montana Ale Works**, in partnership with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday morning 15 inches of snow fell in Hyalite Canyon, 10-12 inches near Bridger Bowl, 8-9 inches near Big Sky and Cooke City, and 2-6 inches near West Yellowstone. Westerly winds have been averaging 20 mph and gusting to 40-50 mph. This morning temperatures were in the high teens F and should rise to the low 20s F today. Winds will remain westerly and ease slightly, blowing 15 mph with gusts of 30-35 mph. Snowfall will continue today. By tomorrow morning most areas will get an additional 3-6 inches. The mountains near West Yellowstone will receive 2-3 inches.

### Snowpack and Avalanche Discussion

#### Bridger Range Northern Gallatin Range

The message for today is simple. Heavy snowfall + strong winds will create both natural and human triggered avalanches. There are three avalanche problems which are interesting to discuss but irrelevant to the travel advice today. Avoid avalanche terrain.

1. Strong winds have created fresh drifts and wind slabs. Doug and Eric intentionally triggered a small avalanche yesterday on a little test slope that had fresh wind drift. More will occur today.
2. Yesterday's snow is much denser (12% at Bridger) than Tuesday's snow (3%) creating upside down conditions. This set up caused Doug and Eric to back off a 32 degree slope yesterday ([video](#)).
3. Some slopes, especially in the northern Gallatin Range, have a thin, weak snowpack. Skiers on Mt Ellis found a very weak snowpack, 2-2.5 feet deep. Similar slopes exist in Hyalite Canyon. With 1.2-1.6 inches of snow water equivalent falling in the last 24 hours, these slopes will not be able to support this much weight and may produce avalanches breaking deeper in the snowpack.

Today, the avalanche danger is rated **HIGH** on wind loaded slopes and **CONSIDERABLE** on all others.

#### Madison Range Southern Gallatin Range

#### Lionhead area near West Yellowstone

Areas further south received less snow but plenty of wind making fresh wind slabs the primary avalanche problem. Another problem is several layers ([video](#), [photo](#)) of weak facets (and some surface hoar - [photo](#)) that formed on the snow surface during dry weather in both early and mid-January. They are now buried 1-2 feet deep. These layers are widespread closer to West Yellowstone. They also exist near Big Sky on many slopes but seem to be more sensitive on south aspects. New snow, wind, and buried weak layers mean dangerous avalanche conditions exist today and the avalanche danger is rated **CONSIDERABLE**.

#### Cooke City

The mountains near Cooke City have a single avalanche problem – fresh wind slabs. This area mostly lacks buried weak layers of facets. For today the avalanche danger is [CONSIDERABLE](#) on wind loaded slopes and [MODERATE](#) on all others.

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.

### **February 16: 11<sup>th</sup> Annual King and Queen of the Ridge**

The 11<sup>th</sup> Annual King and Queen of the ridge Hike/Ski-a-thon fundraiser is Saturday, February 16. The event supports avalanche education. Enter as an individual or a team. Collect pledges for the number of hikes you can do in five hours. Kids and families are encouraged to hike too! Prizes will be awarded to the most hikes (1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup>); most money raised, most laps for a team, most money raised for a team. [More Information](#) / [Registration Form](#)

### [EDUCATION](#)

TONIGHT In **Helena** at 6:30 p.m., the Friends are giving a free *1-hour Avalanche Awareness* lecture at Exploration Works (995 Carousel Way).

In **Bozeman**, on Wednesday, February 6, REI is hosting a *1-hour Avalanche Awareness lecture for Women*. Space is limited and registration is required: <http://www.rei.com/event/47916/session/64605>

The Friends are teaching a free *Companion Rescue Course* in **Big Sky**, at Grizzly Outfitters, on Friday, February 8 from 6-8 p.m., followed by a field session the next day from 10 a.m. to 2 p.m. Space is limited and pre-registration is required: <https://ticketriver.com/event/5830-companion-rescue-clinic-for-skiers-&-boarders>