

GNFAC Avalanche Forecast for Sat Feb 11, 2012

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Saturday, February 11 at 7:30 a.m. **Bridger Bowl**, 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 most areas received 4-6 inches of snow. Winds have been incredibly calm but, yesterday evening they blew westerly 15-20 mph with 30-40 mph gusts. This morning winds were blowing 5-10 mph mostly from the west except in the Bridger Range where cold east winds dropped temperatures into the single digits to teens F. In all other places this morning, temperatures were in the low-mid 20s F. There may be some flurries today but no accumulation. Very calm winds will continue and mostly cloudy skies should keep temperatures from rising more than a few degrees.

Snowpack and Avalanche Discussion

The southern Madison and southern Gallatin Ranges, the Lionhead area near West Yellowstone and the mountains around Cooke City:

Do not trust the snowpack. It produced several large avalanches about one week ago after receiving only a few inches of new snow. One massive avalanche occurred on Mt Abundance and another occurred on Lionhead. Another slide was seen on Thursday in Sheep Creek near Cooke City ([photo](#)). Today's new snow may have added just enough weight, thus enough stress to produce more large avalanches. These can be triggered near the bottom of a slope as Eric found last weekend ([video](#)). He was surprised by this avalanche but wisely traveling in safe terrain just outside the runout zone. When experienced avalanche professionals get surprised, we should take note and be extra conservative in our decisions about where to ride.

Another concern is a layer of weak snow that formed on the snow surface last weekend during a period of clear, sunny weather ([photo](#)). This layer formed on all aspects and will easily break just under the new snow mostly on slopes with wind deposited snow from last night's increased wind. The good news is that this weak layer will make the powder seem deeper than it is. For today, new snow has improved riding conditions but made avalanche conditions worse and the avalanche danger is **CONSIDERABLE** on all slopes.

The northern Madison, northern Gallatin, and Bridger Ranges:

Near Big Sky and Bozeman, the primary avalanche concern is a layer of near surface facets that formed last weekend and was buried yesterday. It exists on all aspects. Ski Patrollers at the Yellowstone Club took amazing photos of these small delicate crystals ([photo](#)), and I found this layer in Hyalite on Tuesday and on Sacajawea Peak yesterday ([video](#)). Ski patrollers at Big Sky reported this layer to be very reactive yesterday afternoon near ridgelines. Westerly winds increased significantly last night easily transporting the new snow. Fresh wind slabs and drifts resting on this weak layer will easily produce avalanches today.

A secondary concern is faceted snow deeper in the snowpack. On Sacajawea Peak yesterday, my partner was shocked seeing weak depth hoar near the ground. As he isolated a column for a compression test, he said "I'm surprised this column is still standing." In fact it took lots of force to break the column (CT21 Q1, CT25 Q1) because the snowpack had no stress on it. With the new snow, it now has stress. A smaller avalanche breaking near the surface will add even more stress and big avalanches are a real possibility. One exception is Hyalite

Canyon where the snowpack is generally much stronger and avalanches breaking deep in the snowpack are unlikely. For today, all wind loaded slopes have a **CONSIDERABLE** avalanche danger. Non wind loaded slopes have a **MODERATE** avalanche danger.

Eric 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 or call us at 587-6984.

FUNDRAISING

TODAY: 10th Annual King and Queen of the Ridge

We'll be hiking laps to the Ridge for dollars today at Bridger Bowl. It's not too late to make a donation. Money raised at this event is used for avalanche education, and the number of classes grows every year and spreads further throughout Montana. Stop by and cheer on the competitors.

EDUCATION

Bozeman

FREE 1-hour Avalanche Awareness at REI on Thursday, February 16 at 6:30 p.m. For more information call REI at 406-587-1938.