

GNFAC Avalanche Advisory for Thu Dec 8, 2011

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 8 at 7:30 a.m. This advisory is sponsored by Javaman and Indulgence and does not apply to operating ski areas. Please remember that uphill traffic is not allowed at Moonlight Basin, and Bridger Bowl will prohibit uphill travel when they open on Friday.

Mountain Weather

Most places remained dry or received a trace of snow overnight except the mountains near Cooke City where 1 inch of new snow fell. This morning temperatures were in the low teens F and winds were blowing 10-15 mph with gusts of 20-30 mph mostly from the NW. Skies will clear today as drier air moves over SW Montana. Temperatures should warm into the low 20's F and winds will remain unchanged. The forecast appears to be dry though the weekend, with great weather for the Ice Festival in Hyalite Canyon.

Snowpack and Avalanche Discussion

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

The snowpack is relatively simple. Generally you can find two basic situations:

1. Some areas like Lionhead have a snowpack about 1-2 ft deep that is completely faceted and weak. This snowpack will become unstable as soon as it gets a cohesive slab on top of it either from new snowfall or wind blown snow ([video](#)).
2. Other areas like Hyalite Canyon and Cooke City have a deeper snowpack about 2-3 ft deep. This snowpack has a weak layer of facets near the ground with a dense slab on top.

Stability tests continue to produce clean fractures in these facets at the ground. As more time passes since the last snowfall, it takes more force to produce these fractures, but in all cases they propagate across extended column tests. We pay more attention to this propagation, which shows instability, rather than the force required to initiate it. This was the case in the Flanders drainage in Hyalite Canyon on Tuesday ([photo](#), [video](#)).

More telling than stability tests results has been recent avalanche activity. On Monday, a skier observed a large natural avalanche on [Sheep Mountain](#) near Cooke City, and the Big Sky Ski Patrol triggered several large slides on the south side of Lone Mtn. Yesterday, the Moonlight Basin Ski Patrol triggered 4 very large avalanches on the north side of Lone Mtn. One had a 5 ft crown and destroyed trees making the area "smell like Christmas."

All of these avalanches occurred on wind loaded slopes. Even though some were triggered with explosives, they show the willingness of facets near the ground to fracture. A skier or rider only needs to find the wrong spot on a slope, and they could trigger an avalanche just as easily. For today wind loaded slopes have a [CONSIDERABLE](#) avalanche danger. Human triggered avalanches remain possible on non-wind loaded slopes where the avalanche danger is rated [MODERATE](#).

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 or call us at 587-6984.

EVENTS/EDUCATION

To check out all our education programs: <http://www.mtavalanche.com/workshops/calendar>

BOZEMAN

Avalanche Awareness Lecture, TONIGHT, December 8, 406 Brewery.

WEST YELLOWSTONE

Snowmobiler Introduction to Avalanches with Field Course. Lectures on Thursday, December 15 with an all day field course on Friday, December 16. Advanced registration is NOT required, but encouraged.

BOZEMAN

Snowmobiler Introduction to Avalanches with Field Course. Lectures on Saturday, January 7, with an all day field session Sunday, January 8. Advanced registration IS REQUIRED.