

## **GNFAC Avalanche Advisory for Fri Jan 27, 2012**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, January 27 at 7:30 a.m. The Big Sky Ski Patrol and World Boards sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday morning, 1-2 inches of snow fell near Big Sky and the Taylor Fork. 4-5 inches fell near Cooke City and West Yellowstone. Temperatures this morning dropped into the single digits F with winds blowing 20-40 mph from the W and NW. Today skies will clear, temperatures will warm into the teens F, and winds will blow 15-30 mph from the W and NW. Tomorrow should be warmer and the next chance of snow may not come until early next week.

### Snowpack and Avalanche Discussion

#### The southern Madison and southern Gallatin Ranges, and the Lionhead area near West Yellowstone:

The weakest and most unstable snowpack exists in the Lionhead area near West Yellowstone and the southern Madison Range ([video](#)). In the last 12 days, the Madison Plateau SNOTEL recorded 4.6 inches of [snow water equivalent](#) and the Carrot Basin SNOTEL recorded 2.7 inches. The weak snowpack will be evident when you step off your sled or out of your skis and sink to the ground. Riding at Lionhead on Tuesday, I saw many avalanches. Some occurred after only 2 inches of snow and wind. With 5 inches of snow yesterday and continued strong winds, there will be more avalanches. Some slopes may avalanche again, and it is still possible to trigger slopes from flat terrain underneath them. For today, wind loaded slopes steeper than 35 degrees have a [HIGH](#) avalanche danger. All other slopes have a [CONSIDERABLE](#) avalanche danger.

#### The mountains around Cooke City:

The mountains near Cooke City have received 6 inches of [snow water equivalent](#) over the last 12 days. This amount of water is about 60 inches of snow, which has added significant stress to the snowpack. When you add enough stress, things break. Many avalanches near Cooke City broke on a weak layer of facets near an ice crust on S facing slopes ([video](#)). During the last 2 days Doug consistently found this layer buried 2-3 feet deep, and I found it in the Sheep Creek drainage 2 weeks ago. N facing slopes are more variable. Some have a relatively strong snowpack. Others have weak facets near the ground. As snowfall buries these facets deeper, it will be harder to trigger an avalanche, but when you do, it will be big and deadly. Don't be fooled by tracks on a slope – these do not indicate stability. Today human triggered avalanches are likely and the avalanche danger is [CONSIDERABLE](#).

#### The Northern Madison Range:

Although the mountains near Big Sky have not received as much snow as areas further south, snow has been steadily falling and adding up to 2.3 inches of [snow water equivalent](#) during the last 12 days. Yesterday on Yellow Mountain on southerly aspects, Eric and I found a layer of facets on top of an ice crust buried about 12 inches deep ([photo](#)). On northerly aspects there was no ice crust but plenty of facets. We triggered an avalanche in a pocket with a heavy wind load that broke on facets near the ground ([video](#)). Snowfall has not been enough to push facets in the snowpack to their breaking point, but very strong winds during the last few days have loaded some slopes to their breaking point. It is on these slopes where you will get an avalanche. For today, wind loaded

slopes steeper than 35 degrees have a [CONSIDERABLE](#) avalanche danger. Other slopes have a [MODERATE](#) avalanche danger.

#### The Bridger and northern Gallatin Ranges:

With less snow, the mountains near Bozeman have had less avalanches than other areas, but these mountains received very strong winds during the last 2 days leaving few slopes unaffected. Skiers on Mt. Blackmore found big drifts well below treeline. The Bridger Range has a very weak snowpack. Triggering a wind slab will create an avalanche that will step down and avalanche on deeper layers in the snowpack. In Hyalite Canyon, the snowpack is mostly strong and avalanches will be confined to fresh wind slabs. For today with heightened avalanche conditions on specific terrain features, the avalanche danger is [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](mailto:mtavalanche@gmail.com) or call us at 587-6984.

#### Events/Education

##### Bozeman

[Advanced Avalanche Workshop with Field Course](#). MSU, Wednesday and Thursday, February 1 and 2 from 7-9:00 p.m. with a field day Saturday, February 4. [Advanced registration](#) is required.

##### Helena

1-hour Avalanche Awareness lecture at Exploration Works on Tuesday, January 31 at 7:00 p.m. Call 457-1800 or check our [calendar](#) for more information.

##### Dillon

[Snowmobiler Introduction to Avalanches with Field Course](#). Lectures on Saturday, February 4 with a field day Sunday, February 5. [Advanced registration](#) is required.