



[GNFAC Avalanche Advisory for Thu Dec 16, 2010](#)

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 16, at 7:30 a.m. **The Yellowstone Club Community Foundation**, in cooperation with the **Friends of the Avalanche Center**, sponsors today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

No snow fell overnight. Temperatures dropped into the upper single digits F, and westerly winds this morning were blowing 5-15 mph. Today's weather will be mostly dry, cold, and calm. Under partly sunny skies, temperatures will warm into the mid to upper teens F and calm winds will blow 5-10 mph.

Snowpack and Avalanche Discussion

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

Over the past 7 days in the mountains near Big Sky, West Yellowstone, and Cooke City, snowfall has been variable. At the beginning of last week, prior to this snowfall, a variety of weak layers formed at the snow surface. Unfortunately Cooke City got a double whammy of weak layers, and all slopes have at least one type of weak layer buried up to 2 feet deep. In this area, if the weak layer isn't surface hoar, it's a layer of near-surface facets. Yesterday, riders near Cooke City didn't spot any major avalanches, but several recent, smaller avalanches ([photo](#)) indicate that the big ones are just waiting to be tickled to life by a skier or rider.

I skied in Beehive and Middle/Bear Basins yesterday on the hunt for surface hoar and found it. It was buried 10 inches deep ([photo](#)) and produced very low scores in stability tests ([video](#)). On Sunday, Eric found a similar layer on Buck Ridge, just south of Big Sky and a skier on Yellow Mountain triggered an avalanche on this layer. This surface hoar was mostly destroyed in alpine areas, well above treeline as well as some west facing slopes, but it is notorious for surprising people. Assume it exists on all slopes until you can definitively prove otherwise.

Further south a group of skiers near the Bacon Rind drainage found surface hoar that was very obvious in stability tests. Last week I looked for this layer in the same area and again on Lionhead. On Monday, Doug looked for it in Carrot Basin. Both Doug and I didn't find it, but surface hoar is tricky, and for now I'm assuming it exists in these areas.

Recent snow has built a slab on top of this surface hoar layer and added enough stress to make human triggered avalanches likely. These are dangerous avalanche conditions requiring careful snowpack evaluations and the avalanche danger is rated **CONSIDERABLE**.

The Bridger and northern Gallatin Ranges:

The Bridger and northern Gallatin Ranges fortunately received strong winds and/or warm temperatures that

mostly destroyed the surface hoar before snowfall returned to these areas. A skier on Mt Ellis yesterday searched for and did not find any surface hoar. In most cases smaller avalanches have occurred mostly on specific terrain features that have wind deposited snow. Yesterday two separate skiers observed smaller avalanches in the Hyalite area ([photo](#)). Similar avalanches occurred near Mt Blackmore and in the northern Bridgers. For today 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.

Upcoming Avalanche Education

Avalanche Awareness for Snowmobilers in West Yellowstone TODAY, December 16th from 12 p.m. to 5 p.m (lectures), with an all day field day Friday, December 17th. For more information check out <http://www.mtavalanche.com/education/classes/snowmobilers> or call us at 587-6984.

Other News

This year REI has chosen Friends of GNFAC as their charity of choice. By making a donation through REI you can help The Friends continue to support the Avalanche Center and promote avalanche education throughout southwest MT.