

## GNFAC Avalanche Forecast for Thu Dec 23, 2010

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on the Thursday, December 23, at 7:30 a.m. Alpine Orthopedics, in partnership with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Overnight the mountains near Cooke City and West Yellowstone received 3-4 inches of snow while all other areas received 1-2 inches. Temperatures this morning hovered near 20 degrees F with westerly winds blowing 5-10 mph. Today temperatures should rise into the mid-upper 20s and winds will remain calm. Mostly cloudy skies will produce some snow in the southern parts of the advisory area but only a trace should accumulate. Further north, skies will have a mix of sun and clouds. The next chance of snow doesn't arrive until after Christmas.

### Snowpack and Avalanche Discussion

#### The northern Madison Range:

Buried surface hoar about 1-1.5 feet deep is the primary concern in the mountains near Big Sky. Just north of Big Sky yesterday, on the ridge between Beehive and Middle Basins, a skier remotely triggered an avalanche about 1 foot deep on this surface hoar. This avalanche occurred on a NE aspect about 150 ft below the ridgeline. Nearby in MacAtee Basin, Doug and Eric also found this layer which produced very low scores and propagated fractures in stability tests ([photo](#)) ([video](#)). This layer was destroyed on some slopes prior to being buried, but its existence is more widespread in the mountains near Big Sky than any other part of the advisory area. A remotely triggered avalanche is a serious sign of instability. With this surface hoar present on many slopes, careful snowpack evaluations are required and the avalanche danger is rated [CONSIDERABLE](#).

#### The mountains around Cooke City and the Washburn Range:

I spent the last two days riding near Cooke City where a layer of small faceted crystals exists on most slopes 2-3 feet deep. A few slides have been observed breaking several feet deep ([photo](#)) including one near Mineral Mtn., one the NE side of Crown Butte, and several south of town. Since Sunday and Monday when over 1.5 feet of snow fell with strong winds, this layer has gained some strength and adjusted to the weight of the new snow; however, it exists on all slopes. Today avalanches are most likely on previously wind loaded slopes steeper than 35 degrees where the avalanche danger is rated [CONSIDERABLE](#). All other slopes have a [MODERATE](#) avalanche danger.

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

In the southern half of the Gallatin and Madison Ranges as well as mountains near West Yellowstone, the snowpack mostly lacks similar layers of surface hoar and other faceted crystals. Unfortunately, isolated areas contain these layers and could catch you by surprise. Doug found buried surface hoar near the Bacon Rind drainage where it broke very easily in his stability tests ([video](#)). Although not widespread, pockets of buried surface hoar remain hiding on a few slopes, and today the avalanche danger is rated [MODERATE](#).

#### The Bridger Range and northern Gallatin Range:

The Bridger and northern Gallatin Ranges have received less snow than other areas and they don't have widespread weak layers making generally stable conditions. Avalanches early this week occurred in fresh wind slabs in steep terrain. However, just like ranges further south, weak snow can be found in isolated areas. Buried surface hoar was found near Flathead Pass yesterday in the northern Bridger Range, and a thin and weak snowpack exist on west side of the Bridger Range. Without stress from an significant new snow, these areas are a minor concern at the moment. For today with some weaknesses present in the snowpack, the avalanche danger is rated MODERATE on all slopes steeper than 35 degrees and LOW on less steep slopes.

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.

#### Avalanche Education

Avalanche Awareness for Snowmobilers and Skiers, West Yellowstone, Holiday Inn; Lectures: Saturday, January 1 from 12-5 p.m.; Field: Sunday, January 2 all day.

No Registration Required. ([more information](#))

There are many upcoming avalanche classes in the month of January. Check them on our education page at: <http://www.mtavalanche.com/workshops/calendar>