

GNFAC Avalanche Advisory for Fri Dec 14, 2012

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, December 14 at 7:30 a.m. Today's advisory is sponsored by Montana Import Group in partnership with the Friends of the Avalanche Center. This advisory does not apply to operating ski areas.

Mountain Weather

Yesterday the mountains near Cooke City and West Yellowstone received 1-2 inches of new snow while all other areas remained dry. Winds have been surprisingly calm in many areas; however, they increased yesterday afternoon before easing this morning to 10-15 mph from the SSW with gusts of 20-25 mph. Temperatures this morning were in the high teens to low 20s F. Today winds will remain the same and possibly calm a bit more by late afternoon. Temperatures will warm into the mid 20s F. More snow will come tonight from the south and favor the mountains near West Yellowstone and the southern Madison Range where 2-4 inches will fall. Other areas will get 1-3 inches.

Snowpack and Avalanche Discussion

[Bridger Range](#) [Madison Range](#) [Gallatin Range](#)

Lionhead area near West Yellowstone

Wednesday's rapidly accumulating snow in the Bridger Range (about 1" of SWE) added too much weight too fast for some slopes, and a skier in the northern Bridger Range spotted several large avalanches. They likely occurred late Wednesday and broke in faceted snow near the ground ([photo](#)). Additionally a skier triggered a slide just below the south summit of Saddle Peak yesterday, but we have few details. On a different note, Doug was flying over the Taylor Fork area of the southern Madison Range yesterday and did not see a single avalanche. Two days ago, the Yellowstone Club Ski Patrol conducted avalanche control work for the first time and did not trigger any avalanches that broke in deeper, older layers of snow.

Let's review the history of the snowpack to understand the current situation.

1. In the big picture, things are looking good especially compared to last season. It is only mid-December and we have a relatively deep snowpack.
2. Although temperatures have been relatively warm, cooler weather in late November led to temperature gradients in the snowpack. Areas with thinner snow had bigger temperature differences over shorter distances, and snow crystals near the ground transformed into poorly bonded faceted crystals. Areas with deeper snow resisted this process.
3. A brief period of clear, cold weather in late November formed a layer of surface hoar (basically frost on the snowpack) that is now buried on isolated slopes near Bacon Rind ([video](#), [photo](#)) and the Taylor Fork areas of the southern Madison Range.
4. Nearly continuous snowfall has occurred for the last 2 weeks and placed a lot of weight on the snowpack.

The current situation – The snowpack has supported the weight of recent snow in many places (i.e.-no avalanches). However, the snowpack is not uniform. Likely places to find weak snow are slopes that had a thinner snowpack due to differences in aspect or different wind patterns. Other places include steep rocky areas that took longer hold snow. Recent avalanches in the Bridger Range confirm the existence of weak, faceted snow near the ground. Wind slabs are always a concern especially when there is so much new snow available for the

wind to transport. Fortunately winds have been somewhat calm in most places limiting wind slab formation.

What to do – First, look for and avoid fresh wind slabs. Second, dig a snowpit on a small slope with similar characteristics to the one where you hope to ski or ride ([video](#) on where to dig). Third, look at the big picture and consider which slopes have thinner snow and which ones have thicker snow. Use the danger rating as a starting point and adjust it up or down based on what you see.

Today heightened avalanche conditions exist on specific terrain features and human triggered avalanches are definitely possible. For these reasons the avalanche danger is rated [MODERATE](#)..

[Cooke City](#)

The mountains near Cooke City received more snow more often than the rest of the advisory area. Consequently, the snowpack is deep and strong on most, but not all, slopes. This snowfall has been both good and bad. It limited the formation of weak, faceted layers in the snowpack; however, it also added a lot of weight to the snowpack. Even though we may be on track for great stability in this area, I would be conservative in my terrain choices and my slope specific stability assessments for now. Additionally, watch for and avoid fresh wind slabs and drifts. For today human triggered avalanches are possible and the avalanche danger is rated [MODERATE](#).

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.

NEW TO THE AREA?

Check out our [Place Names Map](#) which shows common names of popular backcountry areas.

[EDUCATION](#)

Snowmobiler Introduction to Avalanches with Field Course in West Yellowstone on December 20 and 21. Sign up for this class [HERE](#).

Free 1-hour Avalanche Awareness lecture at Bridger Bowl at 1 p.m. in the Jim Bridger Lodge on December 20.