

## **GNFAC Avalanche Advisory for Thu Feb 10, 2011**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, February 10, at 7:30 a.m. Montana Import Group, in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

With no temperature inversion this morning, it was colder in the mountains than in the valleys. Mountain temperatures were in the single digits F except near Cooke City and West Yellowstone where they were a few degrees below 0 F. Winds were blowing 15-30 mph from the W except in the Bridger Range where ridgetop winds were blowing 30-40 mph. Today a trace to 1 inch of snow should fall near Cooke City while all other areas will remain dry. High temperatures will be in the high teens to low 20s F and winds will continue unchanged.

### Snowpack and Avalanche Discussion

#### The Bridger and northern Gallatin Ranges:

In the past 48 hours strong winds blew the new snow (30 inches from the weekend) onto W aspects then back to E aspects by yesterday afternoon. This dramatic event was evident from Bozeman where we could see cornices in the Bridger Range facing town in the morning. By afternoon the same locations had been scoured to bare rock and the cornices were gone. This redistribution of snow is a red flag and a warning sign by itself.

Many slopes have a layer of small facets under the new snow. Doug and Eric found it on Mt. Blackmore ([photo](#)), and it produced an avalanche in the northern Bridger Range on Sunday ([accident report](#)). New snow + strong winds + a sensitive weak layer = dangerous avalanche conditions. The key is to look for slopes unaffected by the wind without facets under the new snow. Today the avalanche danger is rated CONSIDERABLE on all wind loaded slopes. On non wind loaded slopes, the combination of new snow and a sensitive weak layer makes human triggered avalanches very possible, and the avalanche danger on these slopes is rated MODERATE.

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

The mountains near Big Sky and Cooke City have a layer of facets under the new snow on some slopes, but it is not as widespread in these areas as we initially thought. Yesterday just south of Big Sky, Doug and I clocked over 40 miles on the snowmobiles trying to find this weak layer and map its distribution by frequently and quickly digging hand pits about 1.5 feet deep and testing small slopes and wind drifts. Our confidence in the snowpack gradually increased as we didn't find this weak layer and none of our test slopes cracked or moved.

Don't let your guard down because this layer of small facets can be found on specific slopes. Watch for slopes where this layer exists in combination with wind-blown snow which may be in unusual places. Near West Yellowstone this faceted layer is widespread, but it does not have enough new snow on top of it to be a major problem yet ([video](#)) ([photo](#)). 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](mailto:mtavalanche@gmail.com) or call us at 587-6984.

## 9th ANNUAL KING AND QUEEN OF THE RIDGE

The 9th Annual King and Queen of the Ridge will be held at Bridger Bowl this Saturday, February 12. ALL proceeds go to the Friends of the Avalanche Center who use the money to promote avalanche education in southwest Montana. You can help raise money to continue this education in two ways: 1). Get pledges and hike the ridge. You don't have to do 20 laps – you can get flat pledges and hike just once! 2). Sponsor someone. If you don't have someone to sponsor, consider sponsoring the GNFAC since we'll be hiking for dollars. Go to [http://bridgerbowl.com/events/view\\_event/81/](http://bridgerbowl.com/events/view_event/81/) for more information and registration forms.