

## **GNFAC Avalanche Forecast for Wed Feb 16, 2011**

Good morning. This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Wednesday, February 16, at 7:30 a.m. Bridger Bowl Ski Area in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

West winds picked up again yesterday and averaged 30-40 mph with gusts hitting 60-80 mph as temperatures reached the high thirties before falling to the low twenties last night. Currently west-southwest winds are blowing 20-40, except around Cooke City where they are 30-60 mph. Today, expect increasing clouds from a moist, southwest flow and snowfall later this afternoon lasting into tomorrow. Cooke City is poised to get the brunt of the storm. By morning the southern mountains could have 8-10 inches of new snow with half that amount falling in the northern areas.

### Snowpack and Avalanche Discussion

#### The Bridger Range:

Yesterday, Mark, Eric, Karl and I joined folks from Bridger Bowl to investigate the avalanche that killed a snowboarder on the west side of the range two days ago. Although the slide was only 50 feet wide, it was a three foot thick hard slab of windblown snow that broke on a 40-45 degree slope and pulled even more slabs off its flanks. The crown depth tapered quickly from a whale-sized drift of snow on its southern edge to a thin slab only inches deep mid-gully. Thick drifts are all over the place, but in most cases are bonded to the old snow surface. This slide was triggered near the top of the path and funneled debris through small, but not insignificant trees over 1,300 vertical feet. The victim was carried 1,100 feet downhill and came to rest with his head under 5 feet of dense debris. The load of windblown snow from the weekend was a heavy burden. Large loading events do not need a persistent weak layer for avalanches to occur. This avalanche broke on small grains of lighter density snow which happened to be the weakest layer in the snowpack. Although the snowpack investigation yielded no surprises, standing at the top of the path was gut wrenching. The terrain on the west side of Bridger Bowl is steep, serious and unforgiving. All slopes lead into trees, steep gullies or over cliffs. Most of the wind whales are bonded into place and are not cracking or avalanching. But as the two snowboarders found out on Monday, there are still some that can be broken free, especially at its thinner edges where fractures can propagate under the meatiest slab. Given the tricky nature of analyzing these slopes, plus the fact that the winds have not died down, I'm rating the avalanche danger **MODERATE** on all slopes today.

Five photos from our investigation: <http://www.mtavalanche.com/photo>

Video from the avalanche path: <http://www.youtube.com/watch?v=R42ziTqCT28>

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

Winds are blowing throughout southwest Montana. In most areas the snow surface is a mixed bag of hard sastrugi and sun or wind crusts which look like Neil Armstrong's photos of the moon. Both Big Sky and Moonlight Basin Ski Patrols reported strong winds (the fourth in a row of 50+ mph winds) still eroding exposed terrain. Wind-loaded slopes have the greatest instability, especially on slopes that got huge drifts from the weekend. I saw numerous slides in the Taylor Fork area on Sunday while Eric saw thinner wind slabs breaking

around Lionhead on Monday. Because there is not a persistent weak layer underlying these wind slabs, their likelihood of being triggered is very individualized. If you find stable drifts on one slope, do not assume the same for one adjacent. These slabs are getting harder to trigger, but it's still possible. For this reason the avalanche danger is rated [MODERATE](#) on all wind-loaded slopes. Slopes without a wind-load have a [LOW](#) avalanche danger.

Mark 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.

3<sup>rd</sup> Annual Montana Ale Works Fundraiser

When & Where: March 1, Tuesday at 6:00 p.m. in the Railcar.

Cost: \$20 to benefit the Friends of the Avalanche Center

Details: Chef Roth at Montana Ale Works is creating tapas style servings that will be paired with select beer from Lone Peak Brewery. More information [HERE](#).

Upcoming Education

Saturday, February 19, West Yellowstone

The Friends of the Avalanche Center will offer a FREE Basic Avalanche Awareness Workshop at the Holiday Inn in West Yellowstone, MT. 7-8 p.m. (next to the bar) Topics include: terrain, mountain weather, snowpack, rescue procedures, and recent avalanches in local riding areas.