

## **GNFAC Avalanche Forecast for Mon Mar 21, 2011**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, March 21, at 7:30 a.m. Javaman, in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Overnight 2-3 inches of new snow accumulated in the mountains around West Yellowstone, a trace to 2 inches has fallen in the mountains around Big Sky and Bozeman, while the mountains around Cooke City have remained dry. Currently, winds are blowing 15-30 mph out of the SSW with ridgetop gusts reaching into the 40's around Hyalite and Big Sky. Mountain temperatures are ranging from the mid 20's to low 30's F and will rise into the upper 30's by this afternoon. Winds will continue to blow 20-40 mph out of the WSW under cloudy skies. Another storm system is scheduled to impact our area tonight into tomorrow. 4-6 inches is possible in the southern mountains by tomorrow morning, 2-4 inches will likely fall in the north.

### Snowpack and Avalanche Discussion

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

Avalanches are about timing. Most avalanches occur during or immediately after a storm, which is why we had a spike in activity during the later part of last week ([video](#)). Without the presence of a widespread persistent weak layer, avalanche activity has abated quickly. Unlike myself, the snowpack seems to have a fairly strong immune system, healing weak layers before they turn into a lingering issue. Doug and I found this stabilizing trend in the Bridger Range yesterday while investigating a human triggered slide that occurred this past Thursday in the Hourglass Chute. We identified the weak layer as a thin layer of graupel ([video](#)), but we did not get any failures on this layer during stability tests. Mark and I also found similar stabilization of a weak layer in Teepee Basin in the Southern Madison Range last week.

Despite a trend towards stability, the potential for triggering a slide remains. The most likely place to trigger a slide today will be on steep - wind loaded slopes, primarily along upper elevation ridgelines. Yesterday, the Big Sky Ski Patrol triggered dense wind slabs during control work, most of which were triggered above 10,000 ft. The Moonlight Basin Ski Patrol also found sensitive conditions in their upper elevation terrain. They did mention that NE winds created some unusual loading patterns, something to keep in mind when heading to the backcountry. The good news is – avoiding wind loaded terrain is fairly straightforward. Recognizing and steering clear of rounded wind pillows and stiff slabs around exposed terrain features will reduce the chance of triggering a slide.

Another concern is large overhanging cornices that exist throughout our forecast area. These bus sized chunks of snow can break further back than one might expect, and they make for great triggers on the slopes below ([photo](#)). Avoiding these monsters above and below is a wise idea.

Today, human triggered avalanches are possible on wind loaded slopes and slopes steeper than 35 degrees where the avalanche danger is rated [MODERATE](#). Less steep, non-wind loaded slopes have a [LOW](#) avalanche danger.

Doug 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.