

## **GNFAC Avalanche Forecast for Fri Apr 3, 2009**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, April 3rd, at 7:30 a.m. Bridger Bowl in cooperation with the Friends of the Avalanche Center sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Wow, the snow doesn't stop falling! Since yesterday the mountains around Bozeman and Cooke City picked up 5-7 inches of snow and the mountains around Big Sky and West Yellowstone received 7-10 inches. Winds decreased late last night. This morning winds were blowing 5-10 mph from the northwest, but they were a bit gusty at mid mountain elevations in the Bridger Range. Temperatures were in the mid to upper teens F.

The trough of low pressure responsible for yesterday's snowfall will remain over Southwest Montana today. Temperatures will be slightly cooler than yesterday and reach the mid 20s F. Winds will remain light at 5-10 mph from the north. By tomorrow morning the mountains around Bozeman, Big Sky and Cooke City will get an additional 5-7 inches of snow. The mountains near West Yellowstone will get 3-4 inches.

### Snowpack and Avalanche Discussion

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

Over the past week up to 3.4 inches of water has fallen in the advisory area. This water has added up to snowfall well over 3 ft. No matter how you measure it, this snow has put tremendous stress on the snowpack. Most avalanche activity has been confined to wind slabs and pillows of wind blown snow which are the primary avalanche concern. Fortunately these are easy to identify and avoid. What's more scary is an avalanche breaking on deeper layers. Many slopes have a snowpack which has gained enough strength in these layers to support the load of new snow; however, other slopes still have weak snow 1-2 ft above the ground.

Avalanche activity occurred during the previous week prior to this series of storms. More stress has been added to the snowpack, and we must assume more avalanches will occur. Doug and I found strong snow in Beehive Basin on a west facing slope with a notoriously weak snowpack. Our stability tests required substantial force to break isolated columns and did not propagate fractures, but we remained skeptical and opted for a conservative line to ski. Last Friday a group skiing in the Absaroka Mountains just outside the advisory area got similar results in their stability tests where the snowpack was 5 ft deep. They remained skeptical and also skied a conservative line. While skiing they triggered an avalanche on an adjacent slope with an even thinner snowpack. They sent us some excellent photos you can see at: <http://www.mtavalanche.com/photos/photos.php>

Everyday this week local ski patrols have found many wind slabs and pillows that were easily triggered. Though winds have recently decreased, many wind slabs still exist and will easily fracture under the weight of a skier or rider. Many of these wind deposits exist near ridgetops, but some can be found on the lee sides of other terrain features near mid mountain elevations. Much larger avalanches may also occur on deeper layers of old snow where the snowpack was relatively thin prior to these storms. Now these areas can have snow over 5 ft deep and not seem shallow. Today human triggered avalanches are probable on all wind loaded slopes or any slope steeper than 35 degrees where the avalanche danger is rated **CONSIDERABLE**. On less steep slopes without a wind load the danger is rated **MODERATE**.

The mountains around Cooke City and the Washburn Range:

The mountains around Cooke City have received less snow than most other areas and had a stronger snowpack prior to the past week of snowfall. Close to 3 ft has accumulated in these mountains, and strong winds this week have readily transported this snow. A regular observer received reports of a “substantial” natural avalanche on a north facing slope, and he experienced collapsing and cracking on a southwest facing slope. These signs are strong indications of instabilities in snow that has fallen over the past six days. Today a skier or rider will probably trigger an avalanche on any wind loaded slope or any slope steeper than 35 degrees where the avalanche danger is rated CONSIDERABLE. Less steep slopes without a wind load have a MODERATE danger.

I will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry give us a call or send us an email with your observations. You can reach us at 587-6984 or at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com).