

## **GNFAC Avalanche Advisory for Tue Dec 27, 2011**

Good morning. This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Tuesday, December 27 at 7:30 a.m. This advisory is sponsored by Big Sky Ski Patrol and World Boards. This advisory does not apply to operating ski areas.

### Mountain Weather

Currently, under cloudy skies, mountain temperatures are in the teens with westerly winds blowing 20-30 mph. A quick moving system will roll through this morning on a west to northwest flow. Winds will increase with gusts reaching the 40s and snow will fall, but it won't amount to much—only 1-2 inches in the mountains. Another shortwave disturbance is lined up to hit us again tomorrow. Wow, two storms in one week. Could this be La Nina knocking at our door?

### Snowpack and Avalanche Discussion

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

Our last snows were six days ago. Strong winds this weekend created impressive plumes of snow streaming off the high peaks and consequently loaded a few high elevation slopes while stripping others. The snowpack structure is weak with loose faceted snow at the ground. Some slopes are comprised almost entirely of facets, like Mt Ellis. Eric toured there on Christmas day and found over two feet of these loose grains. Slopes will quickly become unstable once they get burdened with new snow. Some slopes already have denser slabs on top of these facets and can avalanche by hitting a weak spot, or from large triggers like explosives at a ski area. [Moonlight Basin Ski Patrol's video clip](#) from Sunday's avalanche control illustrates this well.

Four of us skied into Beehive Basin yesterday to investigate the avalanche a skier triggered on Friday ([photo 1](#), [photo 2](#)). It was low on the slope and small (two feet deep, 50 feet wide, 200 feet vertical, 35-38 degrees steep), but strained through a terrain trap of trees. Luckily no one was caught. As I stood at the crown and looked down slope I was reminded how a small avalanche could have big consequences. The slope was not an obvious avalanche path and the safe practice of skiing one at a time clearly was a good decision by the party. Sometimes we make mistakes and miss gauge stability. Only putting one person at a time on a slope along with carrying rescue gear is an insurance policy for when we are wrong.

The avalanche broke on facets at the ground. We dug many holes in the snow investigating the snow structure ([snowpit diagram](#)) and performing stability tests. A few of our extended column tests broke easily and cleanly [as seen in this video](#). Since it is still possible to trigger similar avalanches throughout southwest Montana today, the avalanche danger is rated [MODERATE](#) on all slopes.

#### The Bridger Range:

The Bridger Range has weak snow, but good stability. Mark and Eric toured there on Saturday and found that most slopes are thinly covered and faceted, but lack a slab to make them unstable. New snow in the next two days could quickly bump up the avalanche danger. The best coverage, hence best skiing, will be found on slopes near the ridgelines that have deeper snow, likely from wind-loading. All wind-loaded slopes will have a [MODERATE](#) avalanche danger today with a [LOW](#) danger rating everywhere else.

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.

## EVENTS/EDUCATION

To check out all our education programs: <http://www.mtavalanche.com/workshops/calendar>

### BOZEMAN

[Women's 1-hour Avalanche Awareness Lecture](#). Wednesday, January 4, 6:30- 8 p.m. at REI.

[Snowmobiler Introduction to Avalanches with Field Course](#). Lectures on Saturday, January 7, with an all day field session Sunday, January 8. Advanced registration IS REQUIRED.

[1-hr Avalanche Awareness Lecture](#). Wednesday, January 11, 6:30-7:30 p.m at REI.

### BIG TIMBER

[1-hr Avalanche Awareness Lecture](#). Tuesday, January 10, 7-8 p.m at Big Timber High School.

### HELENA

[1-hr Avalanche Awareness Lecture](#). Thursday, January 12, 6:30-8:30 p.m at Exploration Works.

### CODY, WYOMING

[Snowmobiler Introduction to Avalanches with Field Course](#). Lectures on Saturday, January 14 at Mountain Valley Motorsports with an all day field session near Cooke City on Sunday, January 15. Advanced registration IS REQUIRED.