

## **GNFAC Avalanche Advisory for Mon Jan 24, 2011**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, January 24, at 7:30 a.m. Bountiful Table, in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

A fast moving weather disturbance deposited 4-5 inches of new snow in the northern Gallatin and Madison Ranges while the mountains around Cooke City picked up an additional 7-8 inches. The Bridger Range and mountains around West Yellowstone picked up 1-3 inches. Winds spiked around 8 pm last night with the arrival of this storm, but have gradually decreased and are currently blowing 10-25 mph out of the WNW. Mountain temperatures are averaging in the mid teens F with Cooke City being the coldest at 5 degrees F. Temperatures will gradually rise into the low 30s by this afternoon and winds will stay consistent out of the W at 10-20 mph. Southwest Montana will likely see a break in the weather this morning, but increasing clouds and a chance of mountain snow will move back into the area tonight. 1-3 inches of snow are possible by tomorrow morning.

### Snowpack and Avalanche Discussion

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

There are two main points of concern in the mountains around Cooke City, West Yellowstone, and Big Sky. The first is load adjustment. Over the past week a large amount of weight has been added to the snowpack, pushing some slopes past their breaking point. Doug and Mark visited Cooke City yesterday, where they investigated a human triggered slide and observed the large natural on Mt. Republic ([photo](#)). Doug did mention he was pleasantly surprised at how little activity there was on surrounding slopes. With new snow and wind last night, the snowpack will continue to work extra hard to find a balance. Although the snowpack lacks a persistent weak layer, the stress added by multiple inches of water and wind can take days even weeks to subside.

Our second point of concern is weak, faceted snow near the ground, which mainly exists in areas where the snowpack is shallow. South and west facing slopes appear to have the widest distribution of faceted snow near the ground, but this intermittent weak layer is not confined to specific aspects and elevations. Rock outcroppings, convex knolls, and areas heavily affected by the wind will be the most likely spots to trigger a slide on buried facets. A skier found this out near Cooke City on Saturday, when he triggered and was caught in a small slide that occurred on a rock outcropping ([photo](#)). On Saturday, the Big Sky Ski Patrol triggered multiple deep slab avalanches on south facing slopes with explosives that ran on buried facets. These are all good indications the snowpack is struggling to find equilibrium under the weight of new and windblown snow.

The arrival of new snow and wind last night will keep the snowpack on edge. Today, human triggered avalanches are likely on all wind loaded slopes where the avalanche danger is rated [CONSIDERABLE](#). Slopes without a wind load have a [MODERATE](#) avalanche danger.

The Bridger Range and northern Gallatin Range:

Stability assessment is a bit easier in the Bridgers and northern Gallatin Range. These two northern ranges have little in the way of buried weak layers, plus they didn't receive the same load that the southern mountains did. Yesterday, I skied near Hyalite Peak and found stable conditions in all my snowpits. My partners and I did

not witness avalanche activity on surrounding peaks nor did we experience signs of instability such as cracking and collapsing; we felt comfortable skiing slopes up to 35 degrees.

A persistent weak layer and a heavy load may be lacking in the mountains around Bozeman, but triggering a slide remains possible. Yesterday, strong SE winds in the Bridger Range loaded northerly slopes which produce fresh soft slabs 8-10 inches deep. The Bridger Bowl Ski Patrol easily triggered these slabs with ski cut and explosives. I expect similar conditions formed in the northern Gallatin Range last night.

A second concern is weak, sugary snow near the ground that has been capped by windblown snow. The most likely areas to encounter this unfriendly combination will be upper elevation slopes that have been heavily wind affected. Avoiding steep, wind loaded terrain is the best way to avoid triggering a slide.

Today, human triggered avalanches are possible on all wind loaded slopes and slopes steeper than 35 degrees where the avalanche danger is rated [MODERATE](#). Less steep slopes without a wind load 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.

## SURVEY

The *Friends of the Gallatin National Forest Avalanche Center* are sponsoring a survey. We're trying to find out how we're doing, what we can do better and who our users are. The survey is 4 pages long and takes 5-10 minutes to complete. <http://www.surveymonkey.com/s/YFCKDZ>

## Beacon Park Opening Celebration

The Bozeman Recreation Department is celebrating the opening of the Bozeman Beacon Park on Friday, January 28th from 4:00 to 6:00 p.m. at Beall Park, 415 N. Bozeman. The Recreation Department will offer food, refreshments, music, and training on how to use the park with your avalanche beacon. This event is free to the public. For information call 582-2290.

## Avalanche Education

### January 26, 27 and 29 in Bozeman

Basic Avalanche Awareness – Next Wednesday & Thursday 7:00 p.m. – 9:30 p.m. at MSU EPS Building, Room 103 with a field day on Saturday at Bridger Bowl ([more information](#)) ([Prepay](#))

### February 2, 3, and 5 in Bozeman

Advanced Avalanche Awareness –Wednesday & Thursday 7:00p.m. – 9:30 p.m. at MSU SUB Room 235 with a field day on Saturday at Bridger Bowl. ADVANCED REGISTRATION REQUIRED ([more information](#)) ([Register](#))

For additional information and a listing of other avalanche classes, go to:  
<http://www.mtavalanche.com/workshops/calendar>