

## **GNFAC Avalanche Forecast for Mon Jan 6, 2014**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, January 6 at 7:30 a.m. **Montana FW&P Recreation Trails Grant** in partnership with the **Friends of the Avalanche Center**, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday morning the mountains around Bozeman and Big Sky picked up a trace to one inch of new snow. The southern mountains remained dry. Currently, temperatures are below zero around Cooke City, but 5-10 degrees above zero elsewhere. Winds are a bit blustery blowing 15-25 mph out the west-northwest with stronger gusts being recorded in the mountains around Bozeman and Big Sky. Today will feel balmy compared to yesterday with highs climbing into the upper teens to mid-twenties F under mostly clear skies. There will be a wind chill as west-northwest winds continue to blow 15-25 mph. The ridge of high pressure that is currently parked over southwest Montana will remain in place for the next 24 hours, but will begin to break down tomorrow as another weak storm system approaches from the west.

### Snowpack and Avalanche Discussion

#### Gallatin Range Madison Range

#### Lionhead area near West Yellowstone

Two plus two equals four...but so does one plus three. What does this have to do with our snowpack? There are multiple equations in our forecast area that add up to the same end result.

In some areas, specifically the Madison Range, northern Gallatin Range and Lionhead area, the snowpack structure is poor. Well developed facets near the ground have struggled to support any type of load.

Over the past seven days, Shower Falls Snotel site in the northern Gallatin Range has received nearly 2" of SWE (snow water equivalent) while the mountains around Big Sky have picked up close to an 1" of SWE. This is a heavy load for a weak snowpack to support and as a result large avalanches have occurred.

On Saturday, a group of skiers observed large natural avalanches near Hyalite Peak in the northern Gallatin Range ([photo](#)). These slides are a clear indicator the snowpack has been pushed past its breaking point. Also on Saturday, a group of skiers remotely triggered a slide from 70 ft. away in Beehive Basin near Big Sky ([photo](#)). Remotely triggered avalanches are a major red flag and indicate very unstable conditions. I also found a poor snowpack structure and experienced unstable results during stability tests on Mt. Ellis yesterday ([photo](#)).

The southern Madison Range and Lionhead area near West Yellowstone have not received as much snow, but also have a very weak snowpack. It will only take a small load of new or wind-blown snow to produce avalanches in these areas. Although there has been little snow over the past 24 hours, moderate to strong west-northwest winds have continued to load leeward slopes.

Today, a weak snowpack structure combined with new and wind-blown snow will make human triggered avalanches likely and the avalanche danger is rated **CONSIDERABLE**.

#### Bridger Range Cooke City

The Bridger Range and mountains around Cooke City possess a slightly different scenario. These areas have a deeper and stronger snowpack, but received heavier amounts of snow and wind over the past week. While faceted layers are not as widespread, they have made their presence known with some large natural and human triggered avalanches.

The most notable was a hard slab avalanche that occurred yesterday on the Football Field south of Bridger Bowl ([photo](#), [photo](#)). This slide was a sympathetic release to control work being done along the southern Boundary. It's a classic example of a weak layer being impacted in a thin/shallow area and propagating into deeper parts of the snowpack. The crown was 2-300 feet wide and ranged from 1-7 feet deep. It failed on a layer of facets about a foot off the ground.

Cooke City has also seen recent avalanche activity. On Saturday, skiers observed natural avalanches on Mt. Republic ([photo](#)) and Mt. Henderson. A large slide was also seen on Scotch Bonnet Mountain near Lulu Pass.

While the snowpack takes time to adjust – human triggered avalanches remain likely and avalanche danger is rated [\*\*CONSIDERABLE\*\*](#).

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.

## **NEW YEAR'S DAY AVALANCHE FATALITY**

See photos, videos and read the full accident report [here](#).

## **EVENTS/EDUCATION**

January 7, BILLINGS: Tuesday, 6:30-8:30 p.m. at High Mountain Recreation, **90-Minute Rescue Presentation**.

January 8, BOZEMAN: Wednesday, 6:30-8 p.m. at REI, **Sidecountry IS Backcountry** lecture.

January 9, BOZEMAN: Thursday, 6-7 p.m. at Mystery Ranch, **1-hour Avalanche Awareness** lecture.

January 9, HELENA: Thursday, 6:30-7:30 p.m. at Exploration Works, **1-hour Avalanche Awareness** lecture.

January 11, COOKE CITY: Saturday, 10 a.m. to 4 p.m., **Companion Rescue Clinic for Snowmobilers**, Pre-Registration is required. <https://www.ticketriver.com/event/9445>

January 11, WEST YELLOWSTONE: Saturday, 7-8 p.m. at Holiday Inn, **1-hour Avalanche Awareness** lecture.

More information our complete calendar of events can be found [HERE](#).