

## **GNFAC Avalanche Forecast for Sun Jan 9, 2011**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, January 9, at 7:30 a.m. Cliff Gullett Memorial Fund, in cooperation with the Friends of the Avalanche Center, sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday morning, 4-6 inches of new snow has accumulated in the Bridger Range, northern Gallatin Range and mountains around Cooke City. The rest of our advisory area picked up 2-3 inches. As the snow moved out the cold temperatures moved in. Currently, mountain temperatures are in the single digits above or below zero and winds are blowing out of the west at 5-15 mph. Today, conditions will remain cold and calm with temperatures struggling to reach the double digits. Winds will stay light out of the west blowing at 5-15 mph under mostly cloudy skies. Snow showers will likely taper this morning with no real accumulations expected over the next 24 hours.

### Snowpack and Avalanche Discussion

#### The northern Madison Range:

Over the past 24 hours, 2-3 inches of low density snow has fallen in the mountains around Big Sky. This new snow alone is likely not enough to push the buried surface hoar layer in this area to its breaking point, but with the added stress of a wind load, things could get interesting.

On Thursday, a snowboarder in Beehive Basin triggered and was caught in a slide ([video](#)). This avalanche failed on buried surface hoar already stressed due to a heavy wind load ([photo](#))([photo](#)). Although this layer has gained strength over time, it continues to demonstrate the ability to propagate fractures and produce avalanches. The surface hoar layer responsible for the slide on Thursday is spatially variable, meaning it is found on some slopes but not on all - even on slopes with similar aspects and elevations. With this sort of variability, careful snowpack evaluation is necessary before riding in avalanche terrain.

Strong westerly winds have accompanied the delivery of the new snow, forming sensitive soft slabs on leeward slopes. These fresh slabs now rest over a variety of snow surfaces, one being a thin rain crust that formed during the warm, wet weather on Thursday and Friday. The Moonlight Basin Ski Patrol reported finding this crust over 9,000 ft and mentioned the new snow is having problems bonding to this layer. Although this layer is thin and not found in all areas, it has the potential to be problematic, mainly in steep wind loaded terrain.

Today, human triggered avalanches are likely on wind loaded slopes where the avalanche danger is rated [CONSIDERABLE](#). Slopes without a wind load have a [MODERATE](#) avalanche danger.

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

New snow and wind have loaded leeward slopes creating dangerous avalanche conditions in wind loaded terrain. Yesterday, the Bridger Range and northern Gallatin Range received strong winds and 4-6 inches of new snow in a short period of time, developing sensitive soft slabs that will easily fail under the weight of a skier or rider. The Bridger Bowl Ski Patrol reported the new snow as being manageable if you were prepared, but did mention it produced enough force to knock a person over or carry someone into rocks or trees if caught off

guard. Doug also found wind loading to be an issue in the steep gullies up Hyalite. In this type of steep, narrow terrain, it does not take a large avalanche to create a serious situation.

Cooke City also picked up 6+ inches out of this latest storm. An observer in the area reported strong winds forming drifts near the ridgelines. He also found a thin rain crust up to elevations of 10,000 ft on westerly exposed aspects. This crust does not appear to be a problem in the area, but will be something that needs to be considered as we get more snow.

Slopes that have received recent wind loading are today's primary avalanche concern. Recognizing and avoiding areas of wind drifted snow is the best way to avoid being caught in an avalanche. Avalanche activity will likely stay confined to the new snow since the snowpack is generally stable in most areas.

Today human triggered avalanches remain likely on wind loaded slopes steeper than 35 degrees where the avalanche danger is rated CONSIDERABLE. On less steep, wind loaded slopes or steep slopes without a wind load, the avalanche danger is rated MODERATE. Slopes without a wind load that are less than 35 degrees have a LOW avalanche danger.

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.

Feeling rusty with your avalanche transceiver? The new beacon park at Beal Park in Bozeman is up and running. It's got 4 transmitters and the park is open 9 am to 8 pm every day. The Friends of the Avalanche Center and the city of Bozeman worked together to make this service possible.

## Avalanche Education

### January 9, Sunday in Helena:

The Friends of GNFAC in cooperation with the Helena Snowdrifters snowmobile club will present a FREE avalanche seminar. The schedule will be as follows:

9am to 11a.m.: 1 hour avalanche awareness lecture; "Dozen More Turns" movie; 12-2 p.m.: Rescue lecture followed by beacon overview. The course will take place at the MACO Building at 2717 Skyway Drive in Helena. For more information : <http://www.mtavalanche.com/workshops/calendar>

### January 11, Tuesday in Big Timber:

In partnership with the Sweetgrass County High School in Big Timber, the Friends of the Avalanche Center will offer a FREE Basic Avalanche Awareness Workshop at the Big Timber High School between 7-8 p.m.

### January 12, Wednesday in Billings:

The Friends of the Avalanche Center in partnership with Families for Outdoor Recreation will offer a FREE Basic Avalanche Awareness Workshop and beacon demonstration at Hi Tech Marine in Billings, MT between 6-8:30 p.m.

### January 12, Wednesday in Dillon:

In partnership with the Birch Creek Center at UM Western in Dillon, MT, the Friends of the Avalanche Center will offer a FREE Basic Avalanche Awareness Workshop in Block Hall, Room 311 on the campus of UM Western at 7-8 p.m.

January 15, Saturday in Cooke City:

The Friends of the Avalanche Center will be sponsoring a 1 hr Basic Avalanche Awareness @ Cooke City Firehall – 6pm to 7pm

For additional information and a listing of other avalanche classes, go to:

<http://www.mtavalanche.com/workshops/calendar>