

## **GNFAC Avalanche Forecast for Sun Jan 29, 2012**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, January 29 at 7:30 a.m. Hans Saari Memorial Fund sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Over the past 24 hours 3-4 inches of new snow has fallen in the mountains around Cooke City while 1-3 inches has fallen elsewhere except the Bridger Range which has remained dry. Currently, winds are blowing are 25-35 mph out of the WNW with gusts reaching into the 60s at the [Hyalite weather station](#). Mountain temperatures are in the low to mid 20s F around Bozeman and mid teens near West Yellowstone and Cooke City. Today, winds will continue to blow 25-35 mph out of the WNW and temperatures will climb into the high 20s to low 30. Skies will remain mostly cloudy with a slight chance of snow showers over the mountains.

### Snowpack and Avalanche Discussion

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

The mountains near West Yellowstone have a snowpack structure similar to a lead safe balancing precariously on stacked wine glasses. This fragile balance will continue as long as a major disruption i.e...new snow, wind loading or a skier/snowmobiler does not facilitate additional stress.

The problem is - this snowpack structure is set up for failure. Unfortunately, every steep slope and any slope that has received a wind load will continue to produce avalanches under the weight of skier or rider. Now is not the time to forget that lower angle slopes connected to steeper slopes are considered avalanche terrain.

Weak layer distribution in the mountains around Cooke City is variable, making stability assessment tricky. The most persistent problem is occurring on southerly aspects where a layer of small grained facets buried 2-3 feet deep are resting over an ice crust ([video](#)). This layer has produced human triggered avalanches over the past week.

Making assessment even more challenging is the fact that many north facing slopes have a similar faceted layer, while other north facing slopes have a relatively strong and stable snowpack. On Friday, just south of Silver Gate, a natural avalanche was observed on a NE facing slope ([photo](#)), a clear sign that unstable conditions persist.

Today, a cohesive slab 2-3 feet thick resting over various faceted layers make human triggered avalanches likely and the avalanche danger is rated [\*\*CONSIDERABLE\*\*](#).

The Bridger Range and northern Madison Range:

Recent observations continue to indicate that the snowpack is gradually gaining strength. On Friday, skiers in Middle Basin found stable conditions on a NE facing slope and over the past few days the Big Sky Ski Patrol has continuously tested wind loaded terrain without results. These are both encouraging signs, but do not be fooled; the snowpack still has all the ingredients for producing an avalanche.

Today's primary avalanche concern will be wind loaded slopes. Over the past 5 days strong west winds have created dense wind drifts on lee side of exposed terrain features ([video](#)). Many of these drifts will be firm and supportable, making travel across them easy. This can provide a false sense of security. While hard and supportable slabs may feel stubborn and stable, they can still cut loose if hit in the right spot. Avoiding wind loaded slopes will be the best way to avoid triggering an avalanche.

While overall stability continues to improve, human triggered avalanches remain possible and the avalanche danger is rated [MODERATE](#).

#### The northern Gallatin Range:

The northern Gallatin Range has the most stable snowpack in our forecast area. The limited distribution of persistent weak layers and minimal snowfall over the past two weeks has made both natural and human triggered avalanches nearly non-existent.

Yesterday a skier on Mt Ellis found good skiing and stable conditions. A skier on Mt Blackmore found similar conditions on Thursday.

Although triggering an avalanche is less likely in this area, it is not out of the question. Isolated pockets of weak snow near the ground and recently formed wind drifts on steep-upper elevation slopes continue to make human triggered avalanches possible. For this reason the avalanche danger is rated [MODERATE](#) on wind loaded slopes and slopes steeper than 35 degrees. Less steep, non-wind loaded slopes 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.

#### Events/Education

##### Bozeman

[Advanced Avalanche Workshop with Field Course](#). MSU, Wednesday and Thursday, February 1 and 2 from 7-9:00 p.m. with a field day Saturday, February 4. [Advanced registration](#) is required.

##### Helena

1-hour Avalanche Awareness lecture at Exploration Works on Tuesday, January 31 at 7:00 p.m. Call 457-1800 or check our [calendar](#) for more information.

##### Dillon

[Snowmobiler Introduction to Avalanches with Field Course](#). Lectures on Saturday, February 4 with a field day Sunday, February 5. [Advanced registration](#) is required.