

## **GNFAC Avalanche Forecast for Sat Dec 10, 2011**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Saturday, December 10 at 7:30 a.m. This advisory is sponsored by World Boards and Lone Peak Brewery and does not apply to operating ski areas.

### Mountain Weather

Over the past 24 hours a ridge of high pressure has kept conditions dry with seasonal temperatures. At 4 am this morning mountain temperatures are ranging from the mid teens to low 20s F with [Madison Plateau](#) near West Yellowstone being the cold spot at 1? F. Winds are out of the WSW at 5-15 mph. Today temperatures will reach the mid 20s to low 30s F and winds will blow out of the WSW at 10-20 mph. Skies will become partly cloudy by this afternoon as the ridge begins to flatten.

### Snowpack and Avalanche Discussion

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

For some time now, long range weather forecasts for southwest Montana have predicted below average temperatures and above average precipitation. So far this La Nina based weather pattern has not materialized. Instead, southwest Montana has seen average seasonal temperatures and below average precipitation. This cold and dry pattern has caused the snowpack to wither into non-cohesive cup-shaped faceted grains known as depth hoar. This rotten layer can now be found in many parts of our forecast area.

Without an overlaying slab, a depth hoar layer alone typically does not produce unstable conditions. This all changes once a slab forms above the faceted layer and a load is applied. Though we haven't received much in the way of new snow, windblown snow has formed slabs over the weak layer and created a formula for producing avalanches ([video](#)).

Over the past few days all the ski areas in our forecast area have triggered avalanches during control work ( [photo1](#), [photo2](#)). From Bridger Bowl to the Yellowstone Club slides are consisting of dense-heavy wind slabs failing on the weak sugary facets near the ground. A skier in the [Taylor Fork](#) found a similar set up, making them avoid steep and wind loaded terrain.

Additionally, a skier near Cooke City observed a recent natural avalanche on a wind loaded slope ([photo](#)). When avalanches occur naturally, it is bull's eye data that unstable conditions exist.

In the northern Gallatin Range, facets near the ground seem to be gaining strength. However, this layer is still producing unstable results in stability tests and should not be trusted ([photo](#)).

Today human triggered avalanches are possible and the avalanche danger is rate [MODERATE](#).

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>

## WEST YELLOWSTONE

[Snowmobiler Introduction to Avalanches with Field Course](#). Lectures on Thursday, December 15 with an all day field course on Friday, December 16. Advanced registration is NOT required, but encouraged.

## BOZEMAN

[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.

## 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.