

## **GNFAC Avalanche Forecast for Mon Dec 14, 2015**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, December 14, at 7:30 a.m. Today's advisory is sponsored by [Grizzly Outfitters](#). This advisory does not apply to operating ski areas.

### Mountain Weather

The well-advertised winter storm has finally arrived. Unfortunately, Snotel sites are still down and we don't have access to snow totals in the mountains around West Yellowstone and Cooke City. Ski resort weather stations are still working and Big Sky is reporting 7-9 inches on new snow over the past 24 hours while Bridger Bowl is reporting close to 5 inches. Looking at some webcams it doesn't appear that the mountains around Cooke City and West Yellowstone received any more snow than the ski resorts.

At 4 a.m., mountain temperatures are in the low to mid 20s F and winds are blowing 5-15 mph. In the Bridger Range winds appear to be coming out of the E-NE while in the mountains south of Bozeman winds are blowing more out of the S-SE. Either way, east winds rarely equate to heavy snowfall so I'm a bit pessimistic as to how much more snow will actually accumulate. The National Weather Service is forecasting 2-4 inches today and 2-4 inches tonight over the advisory area. Along with falling snow, temperatures will drop throughout the day and will be in the teens by this evening. Winds will remain light to moderate out of the E, NE and SE.

### Snowpack and Avalanche Discussion

[Cooke City](#) [Madison Range](#) [Southern Gallatin Range](#)

[Lionhead area near West Yellowstone](#)

This storm didn't pack a knockout punch, but it did throw down enough snow to push the snowpack closer to its breaking point. In the mountains around Big Sky, the 7-9 inches of new snow has totaled over .6 inches of [SWE](#). I'm guessing the mountains around Cooke City and West Yellowstone picked up a similar amount.

Although this isn't a huge load, it will be adding weight and stress to a weak and fragile snowpack ([video](#), [video](#)). The primary avalanche concern today will be avalanches failing on weak facets near the ground ([photo](#)). Signs of instability such as cracking and collapsing along with recent avalanche activity are obvious clues the snowpack is unstable. With the snowpack teetering on the edge, it's likely that avalanches will occur with the added weight of a skier or rider. It's important to remember that during unstable conditions, avalanches can be triggered from low on the slope or from a distance.

Fortunately, winds during this storm have been relatively light, which will help limit the distribution of wind loaded slopes. However, it's likely that areas of wind deposited snow can be found in upper elevation, leeward terrain. Any slope that does have wind deposited snow will likely produce human triggered avalanches.

Today, dangerous avalanche conditions exist. Natural avalanches are possible and human triggered avalanches are likely. For this reason the avalanche danger is rated [CONSIDERABLE](#) on all slopes. The avalanche danger

could rise to **HIGH** if snow and wind continue throughout the day.

#### Bridger Range Northern Gallatin Range

The Bridger Range and northern Gallatin Range have plenty of weak snow, but they haven't received quite the load as the other areas. Bridger Bowl is reporting close to 5 inches of new snow totaling nearly .5 inches of SWE. With Shower Falls Snotel site down it's difficult to know exactly how much snow fell in northern Gallatin Range.

We do know these areas have buried weak layers that will be under stress from the new snow. Yesterday, Doug, Alex and I traveled to Saddle Peak south of Bridger Bowl and were discouraged by the weak and faceted snowpack ([video](#)). We agreed this snowpack certainly has the potential to produce avalanches.

As snow falls through the day, stress will continue to build on these buried weak layers. For this reason human triggered avalanches are likely on slopes steeper than 35 degrees which have a **CONSIDERABLE** avalanche danger. Less steep slopes have a **MODERATE** avalanche danger. The avalanche danger could rise to **HIGH** on all steep slopes if heavy snow continues.

Doug will issue the next advisory tomorrow morning at 7:30 a.m. If you have any snowpack or avalanche observations to share, drop us a line at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com) or leave a message at 587-6984.

#### **EVENTS and AVALANCHE EDUCATION**

A complete calendar of classes can be found [HERE](#).

**Bozeman**: December 15, Tuesday, *Avalanche Awareness and Beacon 101*, Beall Park, 6-8 p.m.

**Bozeman**: December 16, Wednesday, *MAP Brewing Fundraiser*, \$1 pint donated to the Friends of the Avalanche Center

**Cooke City**: December 23, *Avalanche Awareness*, Cooke City Visitor's Center, 6-7:30 p.m.

**West Yellowstone**: *Snowmobiler Introduction to Avalanches with Field Course*

December 17 and 18, 2015: <https://www.ticketriver.com/event/17356>

Five hours of lectures are followed by a full day field course. Topics include: avalanche terrain recognition, the affect weather has on avalanche hazard, the development of the mountain snowpack, decision making skills, and basic search and rescue procedures.