

## **GNFAC Avalanche Advisory for Thu Dec 21, 2017**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 21<sup>st</sup> at 7:15 a.m. Today's advisory is sponsored by [World Boards](#) and [Beartooth Powder Guides](#). This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday morning the mountains around Cooke City and West Yellowstone picked up 8-10" of new snow while the mountains around Bozeman and Big Sky picked up around 6". At 5 a.m. snow has exited the area and temps are in the single digits above or below zero F under partly cloudy skies. Winds are blowing 10-20 mph out of N-NW. Today, temps will be some of the coldest seen all year with highs only climbing into the single digits to low teens F. Winds will continue to blow 10-20 mph out of the W-NW. Skies will start out mostly clear this morning, but will become increasingly cloudy by this afternoon. Another blast of wintery weather enters the area tonight. By tomorrow morning the northern ranges and Cooke City should see 2-4" of new snow while the West Yellowstone area will see 1-3".

### Snowpack and Avalanche Discussion



Southern Madison   Southern Gallatin   Lionhead Range   Cooke City

The southern Ranges have a layer of facets buried 1-2 feet deep ([photo](#), [video](#)). In the mountains around Cooke City, this weak layer just got loaded by well over a foot of snow over the past two days totaling 1.7" of [snow water equivalent](#) (SWE). In the mountains around West Yellowstone, this layer of facets got loaded by a foot of snow totaling roughly 1" of SWE. This rapid and heavy load has created thick slabs that will be easy to trigger.

Yesterday, a skier around Cooke City experienced widespread cracking and collapsing. These are major red flags the snowpack is unstable. We have limited observations from the mountains around West Yellowstone, but given the weak snowpack I found in the Lionhead area last week ([snowpit](#)), there's little question the snow structure is prime for producing avalanches.

On slopes that have been wind loaded, the pack is still near its breaking point. Winds have calmed this morning, but are forecasted to pick back up this afternoon. It won't take much wind loading to make natural avalanches likely on wind loaded slopes today. In non-wind loaded terrain, human triggered avalanches remain likely on all aspects and elevations. Keep in mind, avalanches have the potential to be triggered from a distance or from the bottom of the slope making terrain management critical for safe backcountry travel.

Today, the snowpack remains under a tremendous amount of stress and the avalanche danger is rated [HIGH](#) on wind loaded slopes. Non-wind loaded slopes have a [CONSIDERABLE](#) avalanche danger.



Bridger Range   Northern Gallatin   Northern Madison

The 6" of low density snow that fell over the past 24 hours will elevate the avalanche danger, mainly in wind loaded terrain. West-northwest winds will make slopes facing the east half of the compass most likely to harbor wind slabs. These will be 1-2' thick and will easily fail under the weight of a skier or rider.

On non-wind loaded slopes, small soft slabs and loose snow avalanches (sluffs) will be possible in steeper terrain. These problems will be more likely in areas where the new snow fell on a weak layer of near surface facets. The tricky about this layer is it does not exist on all slopes. We know it can be found on the west side of the Bridgers and certain areas around Hyalite and Big Sky, but we did not find it on Mt Ellis two days ago ( [video](#), [snowpit profile](#)). It's worth digging down a foot or more to assess the new snow-old snow interface.

Today, human triggered avalanches are likely on wind loaded slopes which have a [CONSIDERABLE](#) avalanche danger. Non-wind loaded slopes have a [MODERATE](#) avalanche danger.

If you get out and have any avalanche or snowpack observations to share, drop a line via our [website](#), email ( [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com)), phone (406-587-6984), or Instagram ([#gnfacobs](#)).

## Upcoming Avalanche Education and Events

### [Events and Education Calendar](#)

#### BOZEMAN

**Today**, Dec. 21, **Avalanche Awareness**, 6-7:30 P.m. at Play It Again Sports, Bozeman

Jan. 12 and 13, **Companion Rescue Clinic**, [Info and Register](#)

Jan. 17, 18 and 20 or 21, **Introduction to Avalanches w/ Field Day**, [Info and Register Here](#)

Jan. 24, 25 and 27, **Advanced Avalanche Workshop w. Field Day**, [Info and Register Here](#)

Feb. 9 and 10, **Companion Rescue Clinic**, [Info and Register](#)

#### WEST YELLOWSTONE

Jan. 6, **Avalanche Awareness**, 7-8 p.m. at West Yellowstone Holiday Inn Conference Center

#### COOKE CITY

22 and 23 December, **Weekly Current Conditions and Avalanche Rescue**, 6:30-7:30 p.m. Friday @ the Super 8, and anytime between 10-2 on Saturday @ Lulu Pass road.