

[GNFAC Avalanche Forecast for Sun Jan 17, 2016](#)

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, January 17, at 6:03 AM. Today's advisory is sponsored by [Cooke City Motorsports](#) and [Katabatic Brewery](#). This advisory does not apply to operating ski areas.

Mountain Weather

Overnight a fast but potent storm dropped 6-10 inches of low density snow in the mountains. At 4 a.m. snow appears to be tapering off, but the mountains could see an additional 1-2 inches by late morning. Currently, temperatures range from the mid-teens to low 20s F and winds are blowing 15-30 mph out of the W-NW with ridgetop gusts pushing 40 mph. Today, a break in the weather will allow temps to warm into the mid to upper 20s F under partly cloudy skies. Winds will continue to blow 15-30 mph out of the W-NW with stronger gusts along the ridgetops. No new snow is expected today, but another storm arrives tomorrow. The mountains could pick up 4-6 inches tomorrow into Tuesday.

Snowpack and Avalanche Discussion

[Bridger Range](#) [Madison Range](#) [Gallatin Range](#)

[Lionhead area near West Yellowstone](#) [Cooke City](#)

The extended period of high pressure prior to the latest round of storms weakened the snow surface. This new weak layer is now capped by 6-12 inches of new snow in most locations, with the exception of the mountains around Cooke City where this weak layer is capped by 15-20 inches of new snow.

Yesterday, my partners and I toured to Divide Peak in the northern Gallatin Range and found this weak layer of near surface facets on most aspects and elevations ([video](#)). We got unstable results in compression tests, but the lack of a cohesive slab did not allow for full propagation in our extended column tests. It will likely be a different story today as new snow and wind create a stiffer slab over this weak layer.

As strong winds out of W-NW continue through the day, slopes will become increasingly loaded and unstable.

Today, I expect natural avalanches to occur in steep, wind loaded terrain. If natural avalanches are occurring, it is very likely that human triggered avalanches will occur as well. These slides will be confined to the new snow, but have the potential to propagate deeper and wider than one might expect. Avoiding wind loaded slopes and avalanche run out zones is recommended today.

Due to the weak interface between the new snow and old snow surface, slopes will not have to be wind loaded to produce avalanches. On slopes steeper than 35 degrees, it's likely that skiers or riders will trigger soft slab avalanches. These slides won't be monsters, but they have the potential to produce enough speed and volume to carry and bury a skier or rider. These slides will pose the most threat in steep, high consequence terrain (Saddle Peak) or on slopes with terrain traps such as creek beds or gullies.

While most slides will stay confined to the upper layers of the snowpack, we can't forget about the weak, faceted layer near the ground. This layer is capped by a dense slab and is becoming harder to impact. However, unstable results in stability tests along with the occasional human triggered avalanche are bull's eye information this layer is still problematic and untrustworthy ([photo](#), [photo](#), [video](#), [video](#)).

Today, very dangerous avalanche conditions exist on wind loaded slopes steeper than 35 degrees which have a **HIGH** avalanche danger. All other slopes have a **CONSIDERABLE** avalanche danger.

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

EVENTS and AVALANCHE EDUCATION

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

January 30, *Companion Rescue for Snowmobilers*, <https://www.ticketriver.com/event/18078>

Dillon: January 19, *Ihr Avalanche Awareness*, UM Western Library, 6:30-8 p.m.

January 23 and 24, *Intro to Avalanches w/ Field Course*, <https://www.ticketriver.com/event/18441>

West Yellowstone: January 23, and 30, *Ihr Avalanche Awareness*, West Yellowstone Holiday Inn, 7-8:30 p.m.

EVENT in Bozeman: January 19, 5:30-7 p.m. and 7:30-9 p.m., *Avi Center Beer Social at Montana Ale Works*. This event is a fundraiser for the Friends of the Avalanche Center, \$35. Tickets here: <https://www.ticketriver.com/event/18542>

EVENT at BRIDGER BOWL: February 6, *King and Queen of the Ridge*. A day of hiking and skiing the Ridge as a fundraiser for the Friends of the Avalanche Center. Teams and individuals are welcome! More info here: <http://bridgerbowl.com/event/king-and-queen-of-the-ridge>

ASMSU Intro to Avalanches w/ Field Course

January 20, 21 and 23 or 24: <https://www.ticketriver.com/event/16861>

The workshops will be held on Wednesday and Thursday evenings, with a field course on either Saturday or Sunday. Different topics will be presented each evening. Topics include: avalanche terrain recognition, the effect weather has on avalanche hazard, the development of the mountain snowpack, decision making skills, and basic search and rescue procedures.

Advanced Avalanche Workshop w/ Field Course

January 27, 28, and 30: <https://www.ticketriver.com/event/16862>

Course content includes: snowpack metamorphism, the mechanics of avalanche failure and fracture, and decision-making. Different topics are covered each evening session. The field session includes snowpack analysis and avalanche rescue scenarios.