

[GNFAC Avalanche Advisory for Mon Jan 18, 2016](#)

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, January 18, at 7:03 AM. Today's advisory is sponsored by [World Boards](#) and [Spark R&D](#). This advisory does not apply to operating ski areas.

Mountain Weather

Overnight the mountains south of Bozeman including Cooke City picked up 2-4 inches of new snow, while the Bridger Range remained dry. This morning, temperatures are in the upper teens to mid-20s F and winds are blowing 15-30 mph out of the W-SW. Today, light snow will continue to fall in the southern areas including Big Sky where an additional 1-3 inches is possible. Temperatures will warm into the mid to upper 20s and winds will continue to blow 15-30 mph out of the W-SW. Snow will taper off later in the day and tomorrow looks to be mostly dry. Another storm is forecasted to impact the area Tuesday night into Wednesday.

Snowpack and Avalanche Discussion

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

Lionhead area near West Yellowstone

Over the past 48 hours the mountains around Bozeman, Big Sky and West Yellowstone picked up 6-10 inches of new snow totaling .6 to .9 inches of SWE. Most of this snow fell Saturday night, but Carrot Basin Snotel site in the southern Madison Range has received .4 of SWE over the past 12 hours. This load isn't overbearing, but it has been enough to elevate the avalanche hazard.

Yesterday, the Bridger Range saw the most unstable conditions created by Saturday night's snowfall. The Bridger Bowl Ski Patrol reported widespread avalanche activity during control work and a skier was caught and partially buried in Wolverine Bowl north of the ski resort. All avalanches were confined to the new snow, but slides were propagating wider and running longer than expected. The Big Sky Ski Patrol also reported triggering numerous soft slab avalanches during control work and a skier remotely triggered a small slide in Beehive Basin.

These slides appear to be failing on the new snow/old snow interface, which is now buried 6-12 inches deep ([video](#)). Today, I expect conditions to remain touchy on steep slopes as well as any slope that has received wind deposited snow. Cautious route finding and conservative decision making will be essential for safe backcountry travel today.

While new snow instabilities are the primary concern, avalanches failing at the ground can't be ruled out. Depth hoar continues to produce unstable results in stability tests, demonstrating its ability to propagate a fracture and produce avalanches. Triggering a slide on this layer will be most likely in areas where the slab is thinner. Pay close attention to slope characteristics and avoid steep-rocky slopes where it will be easiest to impact this weak layer ([photo](#), [photo](#), [video](#), [video](#)).

Today, human triggered avalanches are likely on wind loaded slopes and slopes steeper than 35 degrees which have a **CONSIDERABLE** avalanche danger. Less steep, non-wind loaded slopes have a **MODERATE** avalanche danger.

Cooke City

The mountains around Cooke City have received the most snow over the past five days, but avalanche activity has been limited. Yesterday, Doug and Alex reported great skiing and riding with mostly stable conditions. They did not find the layer of near surface facets that has been found in other areas, which has helped keep new snow instabilities to a minimum.

Today, wind loaded slopes will be the primary avalanche concern. Moderate winds out of the west have formed a fresh batch of wind slabs on upper elevation leeward slopes. Yesterday, a skier triggered a small wind slab near Lulu pass, which is a good reminder not to let your guard down ([photo](#)). Today, wind loaded slopes will continue to produce avalanches with human triggers.

Of course we can't end the snowpack discussion without mentioning the weak facets near the ground. This layer does exist in the mountains around Cooke City, but it appears to be gaining strength on some slopes. The increasing variability of this layer makes stability assessment tricky. It's best to assume this layer remains weak on all slopes until proven otherwise. Triggering a slide on this layer will be most likely in steep, rocky terrain where the snowpack is thinner and less uniform.

Today, for the mountains around Cooke City – Human triggered avalanches are likely on wind loaded slopes which have a **CONSIDERABLE** avalanche danger. Non-wind loaded slopes have a **MODERATE** avalanche danger.

Doug 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.