GNFAC Avalanche Forecast for Sun Jan 17, 2021

Good Morning. This is Alex Marienthal with the Gallatin National Forest Avalanche Forecast on Sunday, January 17th at 7:15 a.m. This forecast is sponsored by **Summit Motorsports and Ski-Doo** and **Highline Partners.** This forecast does not apply to operating ski areas.

Mountain Weather

The mountains received no new snow during the last 24 hours. This morning temperatures are teens to low 20s F. Wind is west-northwest at 15-20 mph with gusts of 30-45 mph near Bozeman and Big Sky, and 5-15 mph with gusts to 20 mph near Cooke City and West Yellowstone. Today temperatures will be mid-20s F and wind will be west-northwest at 20-35 mph with gusts to 45 mph. Snowfall will begin later this morning and continue through tomorrow. The mountains near Bozeman and Cooke City are expected to get 5-7" by tomorrow morning with 3-6" during the day tomorrow. Near Big Sky and West Yellowstone can expect 2-4" by morning and 1-3" tomorrow.

Snowpack and Avalanche Discussion

Bridger Range Gallatin Range Madison Range Lionhead Range Island Park

There are two buried persistent weak layers that make avalanches possible to trigger. I found both in Beehive Basin yesterday and discuss them in **this video**. Right now the scariest layer is weak, sugary snow near the ground, buried 2-3 feet deep (**photo of crystals**). Over the last couple weeks we saw large human triggered and natural avalanches break on this layer (**avalanche log**). In addition, a new weak layer of surface hoar is buried 3-6" below recent snow. New snow this afternoon and tomorrow might avalanche easily on this surface hoar layer.

The very weak snow near the ground is slow to gain strength and the snowpack remains unstable. Without recent loading, the chances of triggering an avalanche on this layer have decreased and signs of instability like collapsing and "whumphing" are less common. Unfortunately, this means the instability is less obvious and we might not detect it. This type of snowpack can break after multiple tracks cross a slope. It might avalanche on one slope, but remain in place and appear stable on an adjacent similar slope. Although likelihood has decreased, it is possible to trigger a large avalanche on this weak layer. Thorough snowpack assessment and cautious terrain selection are essential to travel in avalanche terrain. Our best strategy to avoid a large avalanche is to avoid travel on and underneath slopes steeper than 30 degrees. Today the avalanche danger is MODERATE. Expect danger to rise if heavy snowfall and strong wind load slopes this afternoon.

Cooke City

Near Cooke City, a layer of surface hoar buried 4-6" deep has been reactive in stability tests, and yesterday a skier intentionally triggered a small slab on this layer (**photo**). Today avalanches triggered on this layer may be small, but new snow and wind during the next 24 hours will make slabs larger and easy to trigger on this weak layer. An additional concern is weak, sugary snow buried 2-3 feet deep. Skiers triggered avalanches on this layer last week (**Fin avalanche**, **ski-cut north of Cooke**), and some natural avalanches broke earlier this week (

details and photos). These weak layers are not on all slopes, so it is worth digging to check for them before riding steep slopes, and to track where they exist.

Expect danger to rise with the next round of snow later today. Plan to ride terrain that that accounts for stability to decrease this afternoon. Today the avalanche danger is MODERATE.

If you get out, please send us your observations no matter how brief. You can submit them via our **website**, email (**mtavalanche@gmail.com**), phone (406-587-6984), or Instagram (#gnfacobs).

Upcoming Avalanche Education and Events

See our **education calendar** for an up-to-date list of all local classes. Here are a few select upcoming events and opportunities to check out:

Every Saturday in Cooke City, FREE snowpack update and rescue practice at the Round Lake Warming Hut between 10 a.m. and 3 p.m. **Poster with More Info**.

Tuesday, January 19, 6-7 p.m. The Friends of the Avalanche Center will offer a FREE 1-hr Avalanche Awareness Talk in partnership with the University of Montana Western School of Outreach. The talk will be a live, ONLINE event. Join us HERE.

January 20 & 21 (plus field sessions the following weekends), **Avalanche Fundamentals with Field Course**. There are separate field sessions tailored for both skiers and splitboarders (Bridger Bowl) and snowmobilers (Buck Ridge). Register **here**.