

GNFAC Avalanche Advisory for Fri Jan 31, 2014

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, January 31 at 7:30 a.m. [Buck Products](#) and [Northern Lights Trading Company](#) sponsor today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

If you didn't develop a case of powder flu yesterday, then consider calling in sick to work today. Since yesterday morning, the mountains near Cooke City and Hyalite Canyon received about 6 inches of additional snow while all other areas got 2-4 inches. Amazingly winds have not been too strong. This morning they were blowing 10 mph gusting 15-20 mph WNW in most places and coming from the SW in a few others. Temperatures this morning were in the low teens F.

Today winds may increase a little and blow 10-15 mph gusting to 25 mph from the WNW. Temperatures will struggle to climb out of the teens F as a cold air mass descends over the area with very cold temperatures expected tonight and tomorrow. More snow should come late this afternoon and deposit 4-6 inches in the mountains near Bozeman, Big Sky, and Cooke City and about 2 inches near West Yellowstone.

Snowpack and Avalanche Discussion

Gallatin Range Madison Range

Lionhead area near West Yellowstone

About 1.5 feet of snow has fallen in the last 48 hours with 0.8-1.4 inches of [snow water equivalent \(SWE\)](#). This snow added a lot of weight to the snowpack which has two weak layers of concern. One is a widespread layer of facets a foot above the ground that has produced many avalanches this season. The other is a thin layer of small facets that formed on the snow surface during a recent period of high pressure. This layer does not exist on all slopes. Good places to find it and good places to trigger an avalanche on it are slopes that are generally sheltered from the wind. Just north of Big Sky on Wednesday with just 3 inches of new snow, a skier experienced 30 foot shooting cracks on slopes where this thin layer exists.

Last night during an avalanche class at MSU, we reviewed recent avalanche accidents. We saw that many have occurred right after large snow storms when there were layers of weak facets buried in the snowpack. Now is a similar time with dangerous avalanche conditions. Without much wind, I do not expect many natural avalanches. However, human triggered avalanches are likely and the avalanche danger is [CONSIDERABLE](#). The new snow is very light and winds can easily transport it. Watch for any localized wind loading which could quickly raise the avalanche danger to [HIGH](#).

Bridger Range Cooke City

During the last 48 hours the Bridger Range received 1.3-1.9 inches of SWE and the mountains near Cooke City received 1.1 inches of SWE. Beartooth Powder Guides in Cooke City reported nearly double that amount near their yurt northwest of Sheep Mountain. Evaluating stability in these areas will be tricky because many slopes have a strong snowpack that can support this load of snow while some do not.

Identifying these unstable slopes is not easy but important because they will produce avalanches. The faceted layer near the ground produced a large avalanche near Cooke City last Saturday ([photo](#)). The faceted layer just under the new snow produced a small slide just south of Cooke City on Wednesday ([photo](#)). In the Northern Bridger Range, Doug and Eric did not find either layer near the [Throne](#), but we know they are lurking out there. Eric found the faceted layer that now exists under the new snow on the west side of the range last week ([video](#) skip to 0:55).

On steep slopes the new snow alone can make avalanches. Places to find weak facets near the ground will be steep rocky areas with a relatively thinner snowpack. Places to find facets just under the new snow will be slopes sheltered from the wind. Unfortunately these places will not be obvious. For today the avalanche danger is rated [CONSIDERABLE](#) on slopes steeper than 35 degrees. On less steep slopes human triggered avalanches are possible especially if buried facets exist and the danger is [MODERATE](#).

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

KING AND QUEEN OF THE RIDGE

Saturday, February 15th is the **12th Annual King and Queen of the Ridge** Hike/Ski-a-thon fundraiser to support avalanche education in southwest Montana. Collect pledges for one, two or the most ridge hikes you can do in the five hours of competition. 100% of the proceeds go to the Friends of Gallatin National Forest Avalanche Center. Kids and families are encouraged to hike too! Hike as an Individual or Team. [Make a Pledge](#). [Sign Up](#). [More Info](#).

ANDROID APP

If you have an android phone or tablet, you can download our new free app. It's a slick way to get the advisory. [Search Google Play for GNFAC](#). An iOS version is coming soon. Stay tuned.

EVENTS/EDUCATION

February 6, BOZEMAN: Thursday, 6-8 p.m., Beall Park; **Women's Specific Avalanche Awareness Class and Transceiver Practice**.

February 8, BUCK RIDGE: Saturday, 10 a.m. to 4 p.m., **Companion Rescue Clinic for Snowmobilers**, Pre-Registration is required. <https://www.ticketriver.com/event/9446>

February 8, WEST YELLOWSTONE: Saturday, 7-8 p.m., Holiday Inn, **1-hour Avalanche Awareness** lecture.

February 12, BOZEMAN: Wednesday, 6:30-7:30 p.m., MSU Procrastinator Theater, **Sidecountry IS Backcountry** lecture.

February 22, BIG SKY: Saturday, 10 a.m. – 2 p.m., Beehive Basin Trailhead, **Companion Rescue Clinic**. Space is limited and pre-registration is required. <https://ticketriver.com/event/9964>

More information our complete calendar of events can be found [HERE](#).