

GNFAC Avalanche Advisory for Mon Jan 25, 2010

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, January 25, at 7:30 a.m. **Bridger Bowl**, in cooperation with the **Friends of the Avalanche Center**, sponsor today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

A massive low pressure system has moved out of our area and is now sitting over the midwest, continuing to suck cold air from Canada southward into Montana. This low pressure system was responsible for delivering 2-3 inches of new snow to the Bridger Range in the past 24 hours with a trace to 2 inches falling over the rest of the advisory area. Winds have been out of the NW at 15-20 mph, but will calm and shift to the west as the day progresses. Cold and dry conditions will exist over our area for the rest of the day with highs in the 20's and lows in the single digits.

Snowpack and Avalanche Discussion

The Madison Range, Southern Gallatin Range and the Lionhead area near West Yellowstone:

"What a relief!" is the phrase I heard more than once commenting on the skiing and riding conditions from Big Sky to West Yellowstone. With a foot of new snow over the past few days, backcountry enthusiasts' spirits have been heightened but so has the avalanche danger. This new snow sits on top of multiple layers that hold the potential for failing, propagating and producing avalanches. A major area of concern is fresh wind slabs that have formed at mid to upper elevations. Both Big Sky and Moonlight Basin Ski patrols have reported soft wind slab avalanches being triggered by explosives and ski cuts and triggering a wind slab avalanche in the backcountry is very possible.

In addition, there is still a chance that deep slab avalanches could propagate on the weak faceted layer sitting 2-3 feet below the snow surface. This pesky and persistent weak layer has existed within our snowpack since the early part of the season and continues to produce low scores on stability tests and is the culprit for the occasional human triggered avalanche. A new player in the game is a layer of buried surface hoar that sits roughly 40 cm below the surface. This layer was discovered by Doug and his partner as they toured around the Taylor Fork yesterday. Although this layer is not widespread, it did produce extremely easy test scores with an ECTP 12, Q1 and CT 5, Q1. This layer produced loud whumpfing and shooting cracks that extended 200 feet from Doug's ski tips, prompting Doug to test the slope further. The slope failed and avalanched on his first test jump. This touchy surface hoar layer is most prevalent on shady slopes that have not received strong winds. For today, a [CONSIDERABLE](#) avalanche danger exists on all slopes.

Northern Gallatin Range, the Bridger Range, and Mountains around Cooke City

Holy Cold smoke! With 16 inches of new snow in the past three days, the Bridger Range received more snow than any other Range in our advisory area. This produced great skiing and luckily very few avalanches. Our main concern is the development of wind slabs forming close to the ridgeline. With plenty of new snow

available for transport and winds blowing in the 20's for most of the day yesterday, these freshly formed wind slabs will easily fail under the weight of a skier or rider. The possibility of triggering a deep slab avalanche on buried facets remains, but is less likely.

The northern Gallatin Range and mountains around Cooke City hold similar conditions. Face shot skiing was reported on Mt Ellis yesterday with very few signs of instability. I skied Mt Ellis two days ago and found plenty of weak snow but no slab. This could all change very quickly if the wind decides to blow in this area. Fresh wind slabs on steep, mid to upper elevation slopes hold the highest potential for producing avalanches. A skier in Cooke City reported good, stable skiing on slopes less than 35 degrees with no new slab avalanche activity visible. He did however mention that deep buried facets remain a major concern and avalanches that fail on this layer will be large and destructive. With the new snow and strong winds over the past few days a CONSIDERABLE avalanche danger exists on wind loaded slopes. A MODERATE avalanche danger exists on all slopes that have not received wind loading.

Doug will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry give us a call or email with your observations. You can reach us at 587-6984 or email us at mtavalanche@gmail.com.

Avalanche Education

Education Calendar

1. Four Corners Groomer Shack

RESCUE LECTURE: Tuesday, January 26th 7pm. The Gallatin Valley Snowmobile Association is having it annual Chili Feed at 6:30pm in the Groomer Shack at 4 corners.

2. Billings

Avalanche Awareness and Rescue Class-Wednesday, January 27th, 6-9 pm at Beartooth Harley.

3. Big Sky

Moonlight Basin Avalanche Course: Join Moonlight Basin for a comprehensive, two-day and one evening avalanche awareness class. Thursday, Jan 28th 5-9:30pm and Friday and Saturday, Jan 29&30 8am-4pm. Contact: events@moonlightbasin.com or 406-993-6026

4. Bozeman

BASIC AVALANCHE WORKSHOP: The Friends of the Avalanche Center and ASMSU Outdoor Rec are offering a Basic Avalanche Awareness Class the evenings Wed, Thur, 27 & 28 January with a field day on Saturday, 30 January. \$25 donation. No sign up required. <http://www.mtavalanche.com/education/classes/basic>

5. West Yellowstone, Holiday Inn

One-hour Avalanche Awareness Class - Saturday, January 30th - 7pm to 8pm