

GNFAC Avalanche Forecast for Thu Dec 29, 2011

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 29 at 7:30 a.m. This advisory is sponsored by **Montana FWP Recreation Trails Grant**. This advisory does not apply to operating ski areas.

Mountain Weather

Since yesterday the mountains near Cooke City received 7-9 inches of snow and the mountains near Big Sky, the Taylor Fork and West Yellowstone received 4-5 inches. Near Bozeman, the northern Gallatin Range received 1 inch and the Bridger Range received none. All areas have temperatures near 30 degrees F and very strong winds blowing 15-30 mph from the W with gusts of 40-50 mph. Today temperatures should drop to near 20 degrees F by afternoon and strong winds will continue. A little more snow will fall this morning, then snow will return tonight and through Friday. By tomorrow morning most areas especially mountains from Big Sky south will receive 1-3 inches of snow.

Snowpack and Avalanche Discussion

The Madison and southern Gallatin Ranges, the Lionhead area near West Yellowstone:

The entire Madison Range, the southern Gallatin Range and the mountains near West Yellowstone received 4-5 inches of new snow overnight on top of a few inches from yesterday. While this storm didn't provide much snow, it provided very strong W winds. Most slopes have been affected by these winds; some scoured and some loaded. In these areas the snowpack is like an all-you-can-eat buffet of weak snow. Depth hoar crystals exist at the ground, near surface facets exist just under the new snow, and on some slopes one or two **layers of surface hoar** can be found. Avalanches have numerous weak layers on which they can break. Today's snow and wind have provided the slab. The final ingredient needed for an avalanche is a trigger which could be a skier, rider, or more snow.

As more snow falls and winds continue, avalanches will become easier to trigger and could break over progressively larger areas. Even non wind loaded slopes are approaching their breaking point evidenced by a small slide following last week's storm in Beehive Basin ([video](#), [photo1](#), [photo2](#)). For today a **CONSIDERABLE** avalanche danger exist on all slopes.

The mountains around Cooke City:

Near Cooke City, the snowpack lacks the smorgasbord of weak layers found in other areas. Instabilities will be confined to the new snow, but avalanches are just as likely with 7-9 inches of new snow and strong winds. Even slopes unaffected by the wind may have warm, dense snow overlying lighter, cold snow which is a good recipe for an avalanche. Today all wind loaded slopes and all slopes steeper than 35 degrees have a **CONSIDERABLE** avalanche danger. Slopes without a wind load (which are very few) and less than 35 degrees have a **MODERATE** avalanche danger.

The Bridger Range and northern Gallatin Range:

No snow fell in the mountains near Bozeman. To make matters worse the Bridger Range received a slight drizzle of rain. With no new snow and no load, the snowpack in the Bridger Range remains in its holding pattern. It is a very weak snowpack but lacks the stress of new snow to create avalanches. Yesterday the Bridger Bowl Ski

Patrol tested several slopes with explosives near the Slushman's Lift where the snowpack has backcountry conditions. They were not able to trigger avalanches.

The northern Gallatin Range has a similarly weak snowpack on Mt Ellis, but a completely different snowpack in Hyalite Canyon where the snowpack is stronger and deeper. While there is little snow available to be transported by winds, they have blown especially strong in these areas. Today it is possible to trigger an avalanche on slopes that have been wind loaded where the avalanche danger is **MODERATE**. Until more snow falls all other slopes have a **LOW** avalanche danger.

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.

EVENTS/EDUCATION

To check out all our education programs: <http://www.mtavalanche.com/workshops/calendar>

BOZEMAN

Women's 1-hour Avalanche Awareness Lecture. Wednesday, January 4, 6:30- 8 p.m. at REI.

Snowmobiler Introduction to Avalanches with Field Course. Lectures on Saturday, January 7, with an all day field session Sunday, January 8. Advanced registration IS REQUIRED.

1-hr Avalanche Awareness Lecture. Wednesday, January 11, 6:30-7:30 p.m at REI.

BIG TIMBER

1-hr Avalanche Awareness Lecture. Tuesday, January 10, 7-8 p.m at Big Timber High School.

HELENA

1-hr Avalanche Awareness Lecture. Thursday, January 12, 6:30-8:30 p.m at Exploration Works.

CODY, WYOMING

Snowmobiler Introduction to Avalanches with Field Course. Lectures on Saturday, January 14 at Mountain Valley Motorsports with an all day field session near Cooke City on Sunday, January 15. Advanced registration IS REQUIRED.