

GNFAC Avalanche Advisory for Tue Jan 1, 2013

Good morning and Happy New Years! This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Tuesday, January 1 at 7:30 a.m. Today's advisory is sponsored by Ace Powder Guides and HiCountry Snowmobiles in West Yellowstone. This advisory does not apply to operating ski areas.

Mountain Weather

In the last 24 hours a trace to one inch of snow has fallen with light winds out of the northwest. Temperatures this morning are 5-10F under mostly cloudy skies. Today, temperatures will warm into the teens as skies begin to clear. A few flurries will dust slopes as winds continue to blow northwest at 10-20 mph. Sunny skies are on the docket for the rest of the week.

Snowpack and Avalanche Discussion

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

[Lionhead area near West Yellowstone](#) [Cooke City](#)

In order to make good decisions regarding avalanches in the backcountry, there are two questions Mark, Eric and I routinely ask ourselves: What do we know? What should we do about it?

What do we know?

We know that most mountain ranges are generally stable except on individual slopes with a snowpack thinner than three feet deep. These shallow slopes have weak, poorly-bonded faceted grains near the ground that can still avalanche. As evidence, I saw a natural slide on Sunday on [Lionhead Ridge](#) ([photo](#)) and Eric found a snowmobiler triggered avalanche outside Cooke City on Friday ([photo](#), [video](#)). Some other slopes consist entirely of weaker, unbonded facets, but are stable without the burden of new snow. Yesterday, Karl found this on [Mount Ellis](#) and Mark found a similar structure on [Mount Blackmore](#).

What should we do about it?

At a minimum we need to probe to check how deep the snow is. If we find three feet or less, it's a good idea to dig and test the snow. I recommend digging all the time, but if you're lazy and slightly hungover today, at least dig where it's thin. On Sunday, I found a thin slope and did stability tests in multiple pits. This particular slope did not have facets, so we rode on it. Yesterday, on a day off, Mark found stable conditions on Mount Blackmore and skied committing lines. Conversely, to the south near Hebgen Lake on the day after Christmas, Eric found a three foot deep snowpack with facets breaking clean in his tests so he stayed off steeper slopes. Digging allows us to quickly look at the snow structure and determine if there are weaker, granular layers trying to support a denser slab. We recognize this as a poor structure and it deserves a few stability tests.

For today, slopes steeper than 35 degrees will have a [MODERATE](#) danger. Lower-angled terrain has a [LOW](#) avalanche danger.

Looking to the future

The top 6-12 inches of snow is changing. Cold, clear nights and sunny days signal large fluctuations in the radiation balance which quickly turn snowflakes into weak, poorly-bonded facets and/or promote the growth of feathery surface hoar crystals. This surface snow may become a future weak layer once it gets buried. The formation of these crystals began right before Christmas and will continue this week. A skier in Beehive Basin on Sunday noted small avalanches, 20-40 feet wide, breaking a few inches deep, likely on this layer. We'll be keeping an eye on it and so should you.

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.

EDUCATION

Thursday, January 3, 6:00 p.m., 1-hour Avalanche Awareness lecture at 406 Brewing Company, Bozeman.

Tuesday, January 8, 7:00 p.m., 1-hour Avalanche Awareness at Big Timber High School.

Wednesday, January 9, 6:30 p.m., 1-hour Avalanche Awareness at REI, Bozeman.

Thursday and Saturday, January 10 and 12, Rescue Clinic. Thursday at 6:00 p.m. at REI, Bozeman and Saturday at 10 a.m. in the field, location TBD. For more info and to register go

<http://www.rei.com/event/47692/session/64126>

Saturday and Sunday, January 12 and 13, Snowmobiler Introduction to Avalanches with Field Course. For more information and to sign up: <https://www.ticketriver.com/event/4979-snowmobiler-introduction-to-avalanches-w-field>