

## **GNFAC Avalanche Advisory for Sat Jan 5, 2013**

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Saturday, January 5 at 7:30 a.m. Today's advisory is sponsored by Montana Import Group in partnership with the Friends of the Avalanche Center. This advisory does not apply to operating ski areas.

### Mountain Weather

This morning valley temperatures were in the single digits F (West Yellowstone had -20 F) while mountain temperatures were mostly in the low teens F with slightly warmer temperatures in the Bridger Range. Winds were blowing westerly 10-15 mph with gusts of 20 mph. Today, a short lived ridge of high pressure will bring sunny skies and temperatures near 32 degrees F. Winds may ease a bit and today will be a good one to be in the mountains. Clouds will return Sunday afternoon with a chance for snow and a better chance late Monday.

### Snowpack and Avalanche Discussion

#### Bridger Range

On Thursday a skier triggered and was caught in an avalanche in the Hourglass chute just north of Bridger Bowl. It was a wind slab that broke about 75ft wide, 1ft deep and ran 1000ft vertical. Fortunately he was only partially buried and not seriously injured. While investigating the slide yesterday, I felt that this chute was one of the few places in that area with unstable snow. Eric put it best "The hourglass is a catcher's mitt for wind-blown snow from all directions." Watch a [video](#) of the avalanche, a [video](#) of our investigation, and [photo1](#) and [photo2](#).

On an adjacent slope we found weak facets 6 inches below the surface ([snowpit](#)), but this layer did not fracture in our stability tests because it did not have a slab on it. The Hourglass produced an avalanche because it had a wind slab on this weak layer. While many adjacent slopes lacked this slab and were stable, other slopes in the Bridger Range may have a wind slab on a similar weak layer. Today wind loaded terrain, steeper than 35 degrees has heightened avalanche conditions and a [MODERATE](#) avalanche danger. All other terrain has a [LOW](#) avalanche danger.

#### Madison Range Gallatin Range

#### Lionhead area near West Yellowstone Cooke City

The last notable snowfall occurred 10 days ago. Without the stress of new snow, the snowpack is mostly stable, but there is one avalanche problem to consider. During recent dry weather, the snow surface faceted and weakened in many places but not all. Early this week, winds affected many exposed slopes, and some may have a thin wind slab resting on the near surface facets. In Bear Basin on Thursday, I couldn't find this combination and felt comfortable skiing steep terrain. Nearby at Big Sky a small point release on a South facing slope triggered a thin wind slab resting on near surface facets, a clear sign this combination exists and can produce an avalanche. With generally safe avalanche conditions and unstable snow only in isolated locations, today the avalanche danger is [LOW](#).

### NEW WEAK LAYER

Recent dry weather with warm sunny days and clear cold nights weakened and faceted the snow surface in many areas. See this [video](#). How does this happen? The snow surface temperature can vary widely between day and

night while the temperature only 10-12 inches down does not. The result is a big temperature difference over a short distance which changes snow crystals into weak and angular facets. What does this mean for the future? With more snow in the forecast, this new weak layer will be buried and preserved. Once a slab of snow builds on top of it, we'll have the right recipe for avalanches.

Eric 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](mailto:mtavalanche@gmail.com) or call us at 587-6984.

## EDUCATION

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. Currently we only have four people registered and need ten to run the course. We will cancel the course if 6 more do not register by Monday afternoon, January 7<sup>th</sup>. For more information and to sign up: <https://www.ticketriver.com/event/4979-snowmobiler-introduction-to-avalanches-w-field>