

## **GNFAC Avalanche Advisory for Sun Mar 11, 2012**

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, March 11 at 7:30 a.m. Yellowstone Club Community Foundation, in partnership with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

This morning skies are clear, temperatures are ranging between the mid-twenties to low thirties and winds are blowing out of the WSW at 15-25 mph. Today, skies will be partly cloudy, temperatures will warm into the mid-thirties to low forties and winds will continue to blow out of the WSW at 15-30 mph. A change in the weather will take place this evening as a cold front approaches from the west. Skies will become mostly cloudy by tonight and temperatures will be cooler than what we've seen the past few days. Unfortunately there is very little moisture associated with this cold front.

### Snowpack and Avalanche Discussion

The Madison and Gallatin Ranges, the mountains around Cooke City, the Lionhead area near West Yellowstone and the Bridger Range:

Solar radiation and warm temperatures have affected slopes with a southerly aspect, while shady slopes on the northern portion of the compass continue to hold sections of cold and sometimes powdery snow. Beneath the surface however, two problematic weak layers lurk on all aspects – a layer of near surface facets buried 2-3 feet deep and a layer of depth hoar near the ground.

Yesterday, Mark and I rode into the Taylor Fork and found the near surface facet layer to be reactive in stability tests ([video](#)). It was taking hard force to get this layer to fail, but the fact it was propagating made us not trust it. Farther to the north, snowmobilers near Buck Ridge triggered a substantial slide on this layer yesterday ([photo](#)). The slide broke 2-3 feet deep, propagated over 100 feet across and failed on an east facing - heavily wind loaded slope. This layer also produced natural and human triggered avalanches earlier in the week ([photo](#), [photo](#)).

The problem with this layer is it can be found on most slopes, but its strength is high variable. On one slope it will propagate in stability tests while on an adjacent slope it will give you stable results. The best approach is dig down on the slope you plan to ride to evaluate the strength and distribution of this layer. Digging down 3-4 feet to assess this layer takes a short amount of time and is a worth while investment before committing to steep terrain.

An equally dangerous threat today will be the possibility of wet slides. Several days of warm weather and direct solar radiation have weakened the surface snow on southerly aspects. Although temperatures dropped slightly below freezing last night, above average temperatures today and direct sun will make for unstable conditions on sun-exposed slopes. Yesterday, a large wet loose avalanche initiated high above Cleopatra's Needle in Hyalite, sending a large volume of debris over the climb. Steep, rocky terrain such as the gullies in Hyalite will be prime areas for wet loose avalanches to occur. Wet loose avalanches will be most prevalent during the afternoon hours. Also, wet loose avalanches can trigger deeper layers in the snowpack.

A less likely, but potential threat is the possibility of wet slab avalanches. As the snowpack endures multiple days of above freezing temperatures, free water moving through the pack can create unstable conditions. Steep, south facing slopes, specifically those with a shallow snowpack will be the most prone to wet slab avalanches.

Today, the avalanche danger is rated [MODERATE](#). However, as temperatures climb to well above freezing, the danger of wet snow avalanches could rise to [CONSIDERABLE](#) by this afternoon on sun exposed slopes. Pinwheels and point releases are indicators of rising instability. Slopes displaying these signs should be avoided.

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

#### Events/Education

#### [31<sup>st</sup> Annual Pinhead Classic](#)

Come to Bridger Bowl on Saturday, March 17<sup>th</sup> (St. Patrick's Day) with telemark skis, AT skis, alpine skis, snowboards, split boards, or even snow blades. The theme is Snowpocalypse based on the wildly popular Mayan 2012 apocalypse. \$30 gets you into the races, a pint glass, t-shirt, a good time, a raffle ticket, and food by Cafe Fresco. Pre-register at Mystery Ranch or Grizzly Ridge March 11-16. Visit <http://pinheadclassic.com/> or the Pinhead [Facebook](#) page for more info.

#### [1-hour Avalanche Awareness at REI, Bozeman](#)

Tuesday, March 20 at 6:30 pm. Sign up for this FREE class [here](#).