

## **GNFAC Avalanche Advisory for Sun Feb 21, 2010**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, February 21, at 7:30 a.m. **Team Bozeman**, 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 weak upper level trough continues to pump cold air and light bands of moisture into southwest Montana. During the past 24 hours a trace to one inch of new snow has fallen over much of our advisory area with light winds out of the N-NE at 5-10 mph. Today, this upper level low will move to the east giving way to clear skies and cold conditions. Temperatures will struggle into the teens for highs and lows will be in the single digits above or below zero. Calm and clear conditions will persist throughout the day and into tomorrow.

### Snowpack and Avalanche Discussion

#### *The Bridger Range:*

The Bridger Range has not kicked it back in the Lazy Boy quite yet. Facets near the ground are still struggling to support the increasing load that has been adding up since last weekend. At this point the snowpack is in a race against time. Will the pack have time to adjust in its quest to find equilibrium, or will it succumb to the pressure of the new load producing more avalanches? As cold, calm conditions settle in over the next few days, I think it is safe to say we will see the snowpack gain some strength as it is given a breather from this last week of snowfall.

Weaknesses within the snowpack do still exist and the possibility of triggering an avalanche is not out of the question. Avalanches on Bridger Peak, Saddle Peak, and in the Flatirons that all took place last week confirmed the snowpack was under an extreme amount of stress ([video](#)). The snowpack once again proved it was stressed out when a group of skiers triggered a massive avalanche with a cornice drop near Flathead Pass on Thursday. This slide broke nearly 1,000 feet across, ran 1,000 vertical and snapped trees 18" in diameter ([photo](#)). This large slab avalanche failed on facets near the ground and proved anything is still possible with the right trigger. The Bridger Bowl Ski patrol mentioned that skiers are still wary about heading toward Saddle Peak and that only a few tracks have been noticed on the west side of the Range. If you do decide to seek powder on the west side, make sure you choose a conservative and low consequence route because the shallow and weaker snowpack in this area will make it easier to trigger a slide. For today a stressed snowpack continues to make human triggered avalanches probable and the avalanche danger is rated **CONSIDERABLE** on all slopes steep than 35 degrees. The avalanche danger is rated **MODERATE** on all slopes less than 35 degrees.

#### *Northern Madison and northern Gallatin Ranges, the mountains around Cooke City and the Washburn Range:*

The snowpack in the northern Madison and Gallatin Ranges along with the mountains around Cooke City continues to display enough attitude to make one think twice about dropping into a 35 degree, untracked powder run. I found this out first hand in Beehive Basin on Thursday when my partner and I attempted to ski a steeper, SE facing run into Middle Basin. As we approached the steeper part of the run we had a good sized piece of the slope collapse under our skis making us immediately stop in our tracks and skin back to the ridge. Another group of skiers experienced similar signs of instability in Dudley Creek on Wednesday. This group encountered widespread cracking and collapsing on SE facing slopes and witnessed a recent avalanche that filled in an entire

gully. Two other human triggered avalanches occurred on Wilson Peak on Thursday.

A majority of the recent avalanche activity is taking place on slopes with a southerly aspect, which have formed a thin but active layer of near surface facets 1-2 feet below the surface. This thin layer of facets is sitting over a melt freeze crust that is providing a perfect bed surface for the snow to slide. Although the weak layers closer to the surface are more likely to produce avalanches, facets near the ground remain present and continue to hold the potential to produce avalanches especially in areas around rocks or cliff bands where the snowpack is shallow. With multiple weak layers in the snowpack human triggered avalanches remain probable. For today, the avalanche danger is rated **CONSIDERABLE** on all slopes steeper than 35 degrees and **MODERATE** on slopes less than 35 degrees.

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

A stubborn snowpack in the southern ranges has quieted down temporarily, but this does not mean the light is green to ski or ride any slope that looks nice. Major instabilities still exist within the snowpack and the possibility of triggering an avalanche remains very real. Buried surface hoar 1.5 to 2 feet below the surface remains the most likely layer that will produce avalanches in the southern ranges. Because this layer has a patchy distribution, guessing what slopes have it and what slopes don't is a guessing game you can't afford to lose. This surface hoar layer will most likely be found on sheltered slopes protected from the sun and wind, which are now the slopes that are providing the best skiing and riding conditions. Avalanches that do fail on this layer will easily propagate long distances making them difficult to escape once the slide is triggered ([photo](#)).

Facets near the ground remain on all slopes and should not be forgotten. Although this widespread weak layer seems to be fairly dormant with the lack of load, triggering an avalanche on these buried facets remains a possibility, especially in areas around rock outcroppings and cliff bands where the snowpack is shallow. It is important to remember that small avalanches are just as dangerous as large ones, especially in high consequence terrain such as treed slopes or terrain traps that can magnify the consequences of a small slide by burying you deeply or increasing your risk of injury. Today the snowpack in the southern ranges instills more apprehension than confidence. I would not be surprised to hear of human triggered avalanches in these areas over the next few days. For this reason the avalanche danger is rated **CONSIDERABLE** on all slopes steeper than 35 degrees and **MODERATE** on all slopes less than 35 degrees.

I will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry let us know what you find. You can reach us at 587-6984 or email us at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com).

## **Avalanche Education**

### **1. Bridger Bowl**

AAI Level 2 Avalanche Course - Monday, February 22<sup>nd</sup> to Thursday, February 25<sup>th</sup>

[www.americanavalancheinstitute.com](http://www.americanavalancheinstitute.com)

### **2. Moonlight Basin**

Comprehensive avalanche awareness class - Thursday, March 4<sup>th</sup> to Saturday, March 6<sup>th</sup>

[events@moonlight.com](mailto:events@moonlight.com) or 406-993-6026