

## **GNFAC Avalanche Advisory for Sat Feb 13, 2010**

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Saturday, February 13, at 7:30 a.m. **Bridger Bowl**, in cooperation with the **Friends of the Avalanche Center**, sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Since yesterday 20 inches of dense snow fell in the Bridger Range, 6-8 inches in the Gallatin and Madison Ranges and the mountains near Cooke City, and 3-5 inches near West Yellowstone. This morning it's still snowing with temperatures in the high teens to low 20s F and winds blowing hard at 15-30 mph generally from the west. Today will warm into the high 20s F with arctic air to the east moving this direction and limiting further warming. Winds should remain strong this morning and blow 10-20 mph from the west and northwest. By tomorrow morning an additional 1-3 inches of snow will accumulate mostly in the northern half of the advisory area.

### Snowpack and Avalanche Discussion

#### *The Bridger Range*

When talking about snowfall and avalanches, we measure snow by the amount of water it contains to gauge how much weight is added to the snowpack. This storm dropped over 2 inches of water in the Bridger Range in the past 24 hours adding up to 20 inches of dense snow. This snow is a significant load on the snowpack. Last weekend half this amount of snow fell over 48 hours, and several significant avalanches occurred near Ross Peak breaking on facets near the ground. Avalanches also occurred on Bridger Peak and Saddle Peak. With more snow and more wind, more avalanches are likely.

Today the avalanche danger is rated:

**HIGH** on slopes > 35 degrees OR any wind loaded slope.

**CONSIDERABLE** on less steep NON wind loaded slopes.

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

Yesterday Eric and his partner skied on Mt Blackmore where they easily triggered many fresh wind slabs ([photo](#)) while skinning along a ridge. The Big Sky and Moonlight Basin Ski Patrols also triggered many wind slabs that propagated fractures further than normal because the warm temperatures produced denser snow and meatier slabs. Gallatin Snow Rangers near Cooke City reported strong winds that were transporting significant amounts of snow, and they spotted several recent avalanches. Most avalanche activity will occur within the new snow, but a layer weak facets near the ground has a history of surprising us making much deeper and destructive avalanches very possible.

Today the avalanche danger is rated:

**HIGH** on all wind loaded slopes > 35 degrees.

**CONSIDERABLE** on less steep wind loaded slopes OR non wind loaded > 35 degrees.

**MODERATE** on less steep NON wind loaded slopes.

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

Even though the southern areas received less snow, they have been getting nearly continuous snowfall during the last 14 days. This snowfall has been only a few inches each day and has made great riding conditions, but it has not given the snowpack much time to adjust to this loading and created good slabs on top of several notable weak layers: facets near the ground and surface hoar about 2 ft deep. Facets near the ground exist on all slopes while the surface hoar is only found on sheltered slopes and in some cases multiple layers of surface hoar exist in the snowpack. Karl Birkeland did extensive testing on these surface hoar layers yesterday on Lionhead where they easily propagated fractures ([video](#)).

Skiing and riding in the backcountry today will require expert routefinding and travel skills. On sheltered slopes surface hoar may exist and easily produce avalanches. On other slopes strong winds have created fresh wind slabs that will also produce avalanches and possibly cause facets near the ground to break and produce much larger avalanches.

Today the avalanche danger is rated:

**HIGH** on slopes > 35 degrees OR any wind loaded slope.

**CONSIDERABLE** on less steep NON wind loaded slopes.

Eric 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).

## **8<sup>th</sup> ANNUAL KING AND QUEEN OF THE RIDGE, TODAY**

The K&Q of the Ridge raises money for avalanche education and has helped us significantly expand our classes in recent years. All three of us will be hiking the ridge for dollars today. You can sponsor all three of us, just one or donate a flat fee. Mail us at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com).

You can also [make a donation to Team Tyler](#) in memory of **Tyler Stetson**. Tyler was killed in an avalanche in Beehive Basin in January 2008. *Team Tyler* is comprised of family and friends who are traveling to Bridger Bowl from all over the country to compete and honor Tyler's life.

## **Avalanche Education**

### **1. Cooke City Fire Hall**

One Hour Avalanche Awareness Class - TONIGHT 6:30 pm to 7:30 pm

### **2. Bridger Bowl**

AAI Level 1 Avalanche Course - Friday, February 19<sup>th</sup> to Sunday, February 21<sup>st</sup>

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

### 3. **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)

### 4. **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