

## **GNFAC Avalanche Forecast for Sun Dec 27, 2009**

This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Sunday, December 27, at 7:30 a.m. **Bountiful Table**, in cooperation with the **Friends of the Avalanche Center**, sponsor today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Well, if it's not going to be snowing it might as well be sunny and bluebird. No new snow has fallen in our forecast area over the past 24 hours. Clear skies and sunshine is what southwest Montana can expect over the next few days as a strong ridge of high pressure dominates over the region. This weather pattern will keep ridgetop winds light at 5-10 mph out of the E-SE. Heavy inversions will continue to develop over southwest Montana, producing areas of dense valley fog. In the mountains, clear skies will allow for radiational cooling keeping nighttime lows in the single digits while daytime highs will climb close to 30 F degrees.

### Snowpack and Avalanche Discussion

*The Gallatin and Madison Ranges, the Lionhead Area near West Yellowstone, the mountains outside of Cooke City and the Washburn Range:*

I sometimes think the snowpack is similar to humans. The longer it sits around the weaker it gets. It's safe to say that the snowpack in these ranges has been sitting around for quite some time and has grown rather feeble. Aside from the micro burst of snow that hammered parts of Lone Mountain with 10-12" of snow on Christmas, no real strength training has been conducted over the past week. This fragile and delicate snowpack will collapse and fail if even tickled in the right place.

Yesterday, a snowboarder observed a natural avalanche on an east facing slope in McAtee Basin that broke a foot deep, 70 ft across and failed on a 30 degree slope. This type of activity matches what Mark and Doug saw earlier this week while riding on Buck Ridge. This indicates a very weak snowpack that is struggling to support its own weight. The Big Sky ski patrol reported triggering avalanches on south facing slopes that stepped down into older snow. South facing slopes have the shallowest snowpack and hold very weak layers of crusts and facets. These slopes have been recently loaded with heavy wind slabs from the strong north winds over the past few days and hold a high probability of producing avalanches with a human trigger.

Similar conditions exist in the southern Madison Range and mountains around Cooke City. Weak snow throughout the bottom half of the snowpack continues to struggle to support even an inch or two of new snow. Slopes that are steep enough to avalanche will likely fail under the weight of a skier or rider.

Today the snowpack is unstable, human triggered avalanches are probable, and the avalanche danger is rated **CONSIDERABLE**.

### *The Bridger Range:*

Light snow and calm winds have helped level off the avalanche hazard in the Bridger Range. Natural avalanche activity has become minimal and human triggered avalanches have become scarce. This improvement is good for the time being, but should not be seen as a reason to let your guard down. Weak, faceted snow covered by wind slabs still exist and could produce avalanches with the right trigger. Most slopes just have not received the load needed for weak layers to succumb to the forces of gravity.

Yesterday, Mark and his partner traveled to the northern Bridgers around Frazier Lake and found the area to be heavily affected by wind. Stiff wind slabs overlaying weak snow were not hard to find and skiing conditions were challenging. Mark found stability to be variable, though on the track of improving. I skied in the southern Bridgers yesterday and also found wind loaded areas that I avoided, but discovered soft, stable skiing on protected north facing slopes. This type of spatial variability where some areas will exhibit worrisome results while others seem stable will become more widespread throughout the Bridger Range as this calm weather pattern sits over our region.

For today, a **MODERATE** avalanche danger exists on all slopes.

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

## **AVALANCHE EDUCATION**

### **1. WEST YELLOWSTONE**

Snowmobilers and Skiers: Saturday, January 2 from 12-5 pm at the Holiday Inn is avalanche lectures. Sunday, January 3 will be an all day field session for both skiers and snowmobilers. \$30 suggested donation. No sign up required. <http://www.mtavalanche.com/education/classes/snowmobilers>

### **2. BOZEMAN**

Level 1: 7-10 January, Montana Outdoor Science School is offering a Level 1 Avalanche Course. Instructors are Angela Patnode and Jay Pape. For more information, contact Montana Outdoor Science School at 406-582-0526.

### **3. BOZEMAN**

Level 1: American Avalanche Institute is offering a Level 1 Avalanche Course January 22-24, 2010 at Bridger Bowl. Get more information and register at: [www.americanavalancheinstitute.com](http://www.americanavalancheinstitute.com)

### **4. FOUR CORNERS**

Rescue Lecture: On Tuesday, 26 January, the Gallatin Valley Snowmobile Association is having it annual Chili Feed at 6:30pm in the Groomer Shack. At 7:00 there's a free Avalanche Rescue Talk. <http://www.mtavalanche.com/workshops/calendar>

### **5. BOZEMAN**

Basic Avalanche Workshop: The Friends of the Avalanche Center and MSU are offering a Basic Avalanche Awareness Class the evenings Wed, Thur, 27 & 28 January with a field day on Saturday, 30 January. \$25 donation. No sign up required. <http://www.mtavalanche.com/education/classes/basic>