

## **GNFAC Avalanche Advisory for Mon Jan 4, 2010**

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, January 4, at 7:30 a.m. **Yellowstone Club**, in cooperation with the **Friends of the Avalanche Center**, sponsor today's advisory. This advisory does not apply to operating ski areas.

Unfortunately, Montana experienced its second avalanche fatality of the season yesterday when a snowmobiler from Billings was caught and buried in the LuLu Pass area outside of Cooke City. Details at this point are vague, but Doug and Mark are investigating the scene today and we will issue a full report in the next few days. Our thoughts go out to his friends and family.

### Mountain Weather

Since January 1<sup>st</sup>, a moist pacific storm system has dumped over a foot of snow in the mountains around Cooke City and West Yellowstone while the northern Madison, Gallatin and Bridger Ranges pick up between two to four inches. No new snow has fallen over the forecast area in the past 24 hours.

Today, warm weather and mostly sunny skies will prevail over southwest Montana. Winds will start light out of the west at 10-15 mph, increasing later in the day to 15-20 mph along the ridgetops. Temperatures will remain above average with daytime highs reaching the upper thirties and nighttime lows dipping into the twenties. A cold winter storm system will begin to impact our area late tonight and will remain over the region into Wednesday, delivering colder temperatures and measurable precipitation.

### Snowpack and Avalanche Discussion

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

How many of us can balance on an empty soda can without it collapsing? A lucky few perhaps, but even during the most surefooted attempt, a slight shift in weight could make the can buckle and collapse. This is the type of balancing act that we are dealing with in the southern Mountains. The extremely weak snowpack of this area can be easily disturbed by the smallest trigger with the possibility of catastrophic results.

Yesterday a snowmobiler was killed outside of Cooke City when he triggered an avalanche and was swept down slope and buried. Thick supportable slabs sitting over weak faceted snow have the potential to fail under the weight and stress generated by a skier or rider. The snowpack may seem strong and stable near the surface while the true danger sits out of sight, below the supportable layers and in the facets. Out of sight out of mind is a foolish way to look at a fresh powder field during high hazard conditions.

Other natural and human triggered avalanches have been reported around Cooke City, the Lionhead area and the Taylor Fork. Conditions are so unstable that riders in the Taylor Fork reported remotely triggering an avalanche from as far as 40 feet away. Other riders in the Lionhead area remotely triggered an avalanche from the bottom of the slope. Getting avalanches to release from long distances is a serious indication that conditions are sensitive and unstable. Stay clear of runout zones and be aware of low-angled slopes that are connected to steeper terrain since avalanches can propagate over long distances. For today, the avalanche danger is rated **HIGH** on all recently wind-loaded slopes or any slope steeper than 35 degrees. Lower angled terrain has a **CONSIDERABLE** danger.

### *The northern Madison Range:*

The balancing act continues in the mountains around Big Sky. Since January 1<sup>st</sup> 2-4" inches has fallen adding more stress to an already unstable snowpack. This is not the load that the southern Madisons received, but it still is enough to tip the scales and produce avalanches. A skier on Saturday remotely triggered an avalanche on Yellow Mountain that broke 18" deep and ran nearly 1,000 ft downhill. The skier was skinning uphill when he triggered the slide.

Yesterday a skier in Middle Basin dug a snowpit at 8,900 ft on an E facing aspect and observed very weak conditions. The snowpack in this location was more than 36 inches deep with the bottom 16 inches consisting entirely of rotten, faceted snow. This upside down snowpack is similar to what we are seeing in many locations and is the culprit of very unstable and dangerous conditions. Unfortunately slabs sitting over weak layers are often impolite and wait until you are in the worst place possible before they break sending you down with them. The best way to avoid this situation is to stay off wind loaded slopes or slopes that are steeper than 35 degrees.

For today, the avalanche danger is rated [\*\*CONSIDERABLE\*\*](#) on all slopes.

### *The Bridger and northern Gallatin Ranges:*

Calm weather over the weekend sent skiers farther into the Backcountry in search of good snow. While some found safe, soft skiing on lower angle slopes others rolled the dice and ventured into steeper more exposed avalanche terrain. This bold behavior resulted in two close calls over the weekend. The most noticeable event occurred yesterday on MT Blackmore when a skier triggered an avalanche on a steep east facing chute that swept him down and buried him under three feet of snow. The skier's partner was also partially buried, but was able to free himself and dig his friend out. Another party in the Bridger Range triggered a small avalanche in the Hourglass chute north of Bridger Bowl, luckily nobody was caught.

These are all signs that the snowpack continues to be weak and variable. Despite the fact that the Bridger and northern Gallatin Ranges picked up less snow over the past few days, wind loaded slopes continue to produce avalanches with the right trigger. For today our main avalanche concern is on wind-loaded slopes which have a [\*\*CONSIDERABLE\*\*](#) avalanche danger. Slopes not affected by the wind have a [\*\*MODERATE\*\*](#) danger.

Doug 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).

## **LIONHEAD WEATHER**

Our weather station on [Lionhead](#) is now running and reporting weather at 4 a.m. and 4 p.m. We haven't installed the snow sensor yet, but you can check out temperature and wind speed.

## **AVALANCHE EDUCATION**

### **1. 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.

### **2. 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)

### 3. 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>

### 4. 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>

#### 1. Anaconda 1-6-10

Basic Avalanche Awareness - Anaconda Snowmobile Club

#### 2. Big Timer 1-13-10

Basic Avalanche Awareness - Big Timer High School

#### 3. Dillon - 1-14-10

Basic Avalanche Awareness - MT Western University - Dillon