

## **GNFAC Avalanche Advisory for Sat Dec 26, 2009**

This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Saturday, December 26 at 7:30 a.m. **Big Sky Ski Patrol**, 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 moist northerly flow has produced a nice white Christmas and kept light snow falling over the southwest Montana through yesterday afternoon. In the past 24 hours Santa delivered 1-2 inches of new snow to the Bridgers and northern Madison Range while the Gallatin Range, southern Madison Range and mountains around Cooke City picked up a trace to 1 inch. Winds have been moderate out of the W-NW at 15-25 mph. This northerly flow is the tail end of a massive low pressure system that has been hammering the mid-west.

As this low pressure system is pushed to the east, a ridge of high pressure will build over the entire state of Montana bringing clear skies and calm winds through the weekend. For today, average seasonal temperatures will be the norm with daytime highs hitting 25-30 F degrees and nighttime lows dropping close to zero. Winds will be light out of the E-NE at 5-10 mph. This strong ridge of high pressure will dominate our weather pattern for the next three to five days making for some great weather to get out and play with the new toys.

### Snowpack and Avalanche Discussion

#### **SNOWPACK AND AVALANCHES**

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

In the past 48 hours the Christmas snow gods came through delivering 8-10 inches of new snow to Big Sky and the northern Madison Range. The Gallatin Range, southern Madisons and mountains around Cooke City didn't get quite as lucky, but still picked up 1-3 inches. Strong winds combined with the new low density have formed thick wind slabs on many leeward slopes. These freshly formed wind slabs are sitting over weak faceted snow that has existed within our snowpack for the past three weeks. Despite some warmer weather last week and having almost three weeks to adjust to a small incremental snow loads, these weak layers remain resilient and show no sign of leaving anytime soon.

On Wednesday both the Big Sky and Yellowstone Club Ski Patrols reported triggering avalanches that broke at or near the ground on these old and weak layers of facets. Skiers in Beehive Basin also reported unstable conditions. A human triggered avalanche that ran down slope and sympathetically triggered a second avalanche along with clean easy shears that popped out during stability tests are all great examples that the snowpack has very little strength.

Similar conditions exist in the southern Madison Range and mountains around Cooke City. New snow and strong winds have loaded many slopes pushing the stability of the snowpack in these ranges to the edge. With the pack balancing on the cusp of failure, natural avalanche activity will not always be apparent. This does not mean that avalanches won't happen. The added stress of a single skier or snowmobiler will be all it takes to tip the scales and produce avalanches.

For today, natural avalanches are possible and human triggered avalanches are probable making the avalanche danger **CONSIDERABLE**.

### The Bridger Range:

Over the past few days the Bridgers have picked up 2-3 inches of the famous cold smoke and have been hit hard with N-NW winds. These strong winds have helped some areas while hurting others. The ski area has benefited from these winds with free refills and nice wind buff being found throughout much of the area. Yesterday, I skied Bridger Bowl and found surprisingly soft, fluffy skiing off the ridge with an occasional face shot, a very nice Christmas present indeed.

Outside of the ski area conditions are different. Any slope that has not been protected from the wind has formed punchy hard wind slabs. These freshly formed slabs are now sitting over a multitude of weak layers and crusts. It's a guessing game as to which layer will fail and how big the avalanche will be. It's quite possible for a smaller avalanche to trigger a larger one. One skier or rider crossing a wind loaded slope will be all it takes to trigger and avalanche.

Today, a **CONSIDERABLE** avalanche danger exists on all wind loaded slopes while a **MODERATE** avalanche danger exists on less steep slopes sheltered from the wind.

Always travel one at a time in the backcountry and make sure everyone in the group has rescue gear and knows how to use it. Skiing Saddle peak is NOT the place to learn how to use your transceiver.

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>