

## **GNFAC Avalanche Advisory for Wed Jan 6, 2010**

Good Morning. This is Doug Chabot with the Gallatin National Forest Avalanche Advisory issued on Wednesday, January 6, 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.

### **AVALANCHE WARNING**

We are issuing a Backcountry Avalanche Warning for our forecast area: the Bridger Range, the entire Madison and Gallatin Ranges, the Lionhead area near West Yellowstone, the mountains around Cooke City and the Washburn Range in Yellowstone National Park. New snow over the last 36 hours was deposited on an extremely weak snowpack. Today the avalanche danger is rated **HIGH** on all slopes. Unstable snow exists. Natural and human triggered avalanches are likely. Avalanche terrain, including avalanche runout zones should be avoided.

This warning will either be terminated or updated by 6:30 a.m. on January 7, 2010

### Mountain Weather

New snow is blanketing all of southwest Montana. Since yesterday morning's forecast 7-12 inches of dense snow fell. This brings the storm totals to 17 inches in the Bridgers, 10-13 inches in the northern Gallatin Range, mountains around Big Sky and Taylor Fork area. The mountains around West Yellowstone got 5-8 inches with Cooke City gaining another 15 inches. Temperatures plummeted from the mid 20s to zero last night around Bozeman. The cold air did not push too far south and Lionhead is showing a balmy 15F. West winds spiked last night with gusts near 50 mph. Currently they're blowing westerly at 10-20 mph, but 25-35 mph outside Cooke City. Other than a few isolated showers this morning, winds will remain moderate before calming tonight and temperatures will only reach the single digits up north and high teens in the south.

### Snowpack and Avalanche Discussion

Sometimes avalanche forecasting can be tricky, but today isn't one of those times. From the mountains around Bozeman to Big Sky to West Yellowstone to Cooke City, the conditions are the same: Bad. Bad in a dangerous, don't-get-near-any-avalanche-terrain, way. Weak, poorly bonded, faceted snow is found on most aspects and elevations in southwest Montana. This snowpack will have a difficult time supporting the recent snows for two reasons. First, the storm put heavy, dense snow everywhere: 11-12% density. For reference, cold smoke powder is 2-3%. As forecasters we're most interested in the weight of the snow which is measured as Snow Water Equivalency (SWE). Most areas got .7-1" of SWE with the Bridger Range getting 1.5" SWE. Our feeble snowpack is so weak that it won't hold the new snow and I expect to see many natural avalanches today. Secondly, the snow that fell came in quick. A fast snowfall rate does not allow the snowpack to adjust to the new load. At times it was snowing furiously, quickly increasing the stress on the snowpack. And strong winds easily doubled or tripled this load at the ridgetops.

Lots of dense snow falling quickly on a weak, unstable snowpack is bad news. All our observations, snowpits, stability tests and reports from other skiers and riders back this up. Before the storm we had a skier buried in Hyalite, an avalanche fatality outside Cooke City, remotely triggered avalanches in the southern Madison and Lionhead area and widespread cracking and collapsing. The new, heavy snow, have made the conditions worse. That's why, throughout our entire advisory area, the avalanche danger is rated **HIGH** on all slopes. Stay off of avalanche terrain and give avalanche paths a wide berth. In these conditions it's possible to trigger avalanches

from afar.

On a historical note, I don't believe the GNFAC has ever issued a Warning for the entire forecast area.

### **COOKE CITY AVALANCHE FATALITY**

On Sunday, January 3<sup>rd</sup>, a snowmobiler was killed in an avalanche on Scotch Bonnet Mountain near Lulu Pass outside Cooke City. I posted a complete report on the [Accidents page](#) along with photos and a video.

Mark 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).