

## **GNFAC Avalanche Advisory for Thu Dec 9, 2010**

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 9, at 7:30 a.m. The Montana Fish, Wildlife and Parks Snowmobile Program, in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

Calm weather ended yesterday with winds in Hyalite Canyon blowing 40-60 mph. This morning winds throughout the advisory area were blowing 20-40 mph from the W with temperatures in the low 20s F. The mountains near West Yellowstone received 6 inches of snow, the southern half of the advisory area received 2-3 inches and the northern half received only a trace. Under cloudy skies today winds will remain strong and temperatures will only climb a few degrees. With moisture streaming through Idaho into Wyoming, mountains near West Yellowstone will receive 2-3 inches of snow by tomorrow morning, and the rest of the area will get 1-2 inches.

### Snowpack and Avalanche Discussion

The Bridger, Gallatin and Madison Ranges, the Lionhead area near West Yellowstone, the mountains around Cooke City and the Washburn Range:

Since Saturday, warm sunny days, clear cold nights, and calm winds have formed surface hoar throughout the advisory area. Surface hoar forms when moisture in the air is deposited on the snow surface like frost on a car windshield. Unfortunately good meteorological conditions for surface hoar are also good conditions for the formation of small faceted crystals in the top several inches of the snow surface ([video](#)). Regardless of the exact crystal type or process, recent weather weakened the old snow surface which is now covered by new snow and is the weakest layer in the snowpack. A few isolated areas have a faceted layer near the ground at an October ice crust, and it is worth digging to the ground to test the strength of layer.

More importantly for today is the combination of strong winds ([photo](#)) from the west and lots low density snow available for transport. Many fresh wind slabs exist near ridge lines, and many of these wind slabs rest on either the surface hoar or other faceted crystals that formed on the old snow surface. With continued strong winds and some new snow, these wind slabs will continue to grow and become more sensitive. For today, the avalanche danger is rated **CONSIDERABLE** on all wind loaded slopes and **MODERATE** everywhere else. Heads up, because many wind slabs rest on facets and/or surface hoar, they will be more sensitive and break over wider areas than you may expect.

I will issue the next advisory tomorrow morning at 7:30 a.m. If you have any snowpack or avalanche observations, drop us a line at [mtavalanche@gmail.com](mailto:mtavalanche@gmail.com) or call us at 587-6984.

### Upcoming Avalanche Education

“How Much Did It Snow?” Join Lucas Zukiewicz from the Montana Snow Survey for a FREE presentation/discussion on the SNOTEL system in SW Montana. The discussion will cover how to access SNOTEL information and interpret the data for snow and weather conditions. Saturday, December 11, 7:30pm – 8:30pm at World Boards.

Avalanche Awareness for Snowmobilers in West Yellowstone Thursday, December 16<sup>th</sup> from 12 p.m. to 5 p.m (lectures), with an all day field day Friday, December 17<sup>th</sup>. For more information check out <http://www.mtavalanche.com/education/classes/snowmobilers> or call us at 587-6984.

#### Other News

This year REI has chosen Friends of GNFAC as their charity of choice. By making a donation through REI you can help The Friends continue to support the Avalanche Center and promote avalanche education throughout southwest MT.