

## **GNFAC Avalanche Advisory for Thu Dec 30, 2010**

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Thursday, December 30, at 7:30 a.m. **Gallatin County Search and Rescue**, in partnership with the **Friends of the Avalanche Center**, sponsors today's advisory. This advisory does not apply to operating ski areas.

### Mountain Weather

The final storm of 2010 deposited an additional 7-8 inches of snow in most areas except near West Yellowstone where an additional 10-12 inches fell since yesterday morning. Although light snowfall will continue today, only an inch or two should accumulate. This morning temperatures had dropped to the single digits F near West Yellowstone and around -5 degrees F everywhere else. Winds were blowing 5-15 mph from the N and E. Today temperatures should drop further to almost -10 degrees F with cold E and NE winds blowing 10-15 mph.

### Snowpack and Avalanche Discussion

#### *The northern Madison Range:*

The mountains around Big Sky have received over 1 ft of snow during the last 48 hours, and ski patrols on Lone Mountain have easily triggered slab avalanches on wind loaded slopes. At Moonlight Basin, the ski patrol triggered one avalanche that broke on a layer of surface hoar buried 2 ft deep. With plentiful new snow and sufficient wind (blowing SW during the first half of the storm then switching to the N and E), avalanches occurring in the new snow are likely. Many slopes contain a layer of surface hoar buried 2 feet deep that will also be a problem. Around Big Sky the key will be to find low angle slopes lacking both wind deposited snow and the buried surface hoar layer. For today, the avalanche danger is **HIGH** on all slopes that are wind-loaded. All other slopes have a **CONSIDERABLE** danger.

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

The mountains near West Yellowstone have been the big winner during this storm receiving about 20 inches of snow in the last 48 hours while other areas received about 10-12 inches. Generally the snowpack is strong and avalanches will mostly be confined to the new snow. Yesterday Doug and I skied near Hebgen Lake and found no weak layers in the snowpack similar to our findings near Lionhead, Teepee Basin, and the Taylor Fork area. We observed minor cracking in the new snow but felt safe skiing mellow slopes without wind deposited snow. Near Cooke City a skier observed a small avalanche on a NE facing slope and reported a skier triggered avalanche on an E facing slope near Lulu pass on Tuesday. This avalanche was about 100ft wide and 1 ft deep.

Although the snowpack is generally strong, some areas may have avalanches breaking into deeper layers of snow. Near Cooke City, a layer of small facets exists on all slopes about 3 ft deep though this layer hasn't been very sensitive. Near the Bacon Rind drainage and near Flathead Pass, buried surface hoar has been found, and on the west side of the Bridger Range on S and W facing slopes, the snowpack is thin and weak. Today avalanches are most likely on wind loaded slopes which have a **HIGH** avalanche danger. Non wind loaded slopes that are steeper than 35 degrees have a **CONSIDERABLE** avalanche danger. Until the snowpack has time to adjust to the weight of this new snow, search for slopes without wind blown snow that are less than 35 degrees where the avalanche danger is rated **MODERATE**.

#### *The northern Gallatin Range:*

Unfortunately the northern Gallatin Range, including the Hyalite Canyon area, has only received about 6 inches during this storm. In simple terms, less snow means less avalanches and the snowpack was mostly strong and stable prior to this storm. The old snow surface was highly variable and the new snow needs some time to bond to it. Additionally, isolated areas contain some weak snow that will be stressed by the weight of wind deposited snow. For these reasons today, the avalanche danger is rated **CONSIDERABLE** on wind loaded slopes and **MODERATE** on all others.

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.

## **Avalanche Education**

*Avalanche Awareness for Snowmobilers and Skiers*, West Yellowstone, Holiday Inn;

Lectures: Saturday, January 1 from 12-5 p.m.; Field: Sunday, January 2 all day. No Registration Required. ([more information](#))

There are many upcoming avalanche classes in the month of January. Check them on our education page at: <http://www.mtavalanche.com/workshops/calendar>