

## **GNFAC Avalanche Advisory for Sat Nov 20, 2010**

Good Morning. This is Mark Staples with an early season avalanche information bulletin issued on Saturday, November 20 at 7:30 a.m. This bulletin is sponsored by Alpine Orthopedics, in partnership with the Friends of the Avalanche Center. Please remember that uphill traffic is not allowed at Big Sky or Moonlight Basin Ski Areas. Bridger Bowl is not open and has backcountry snow conditions.

### Mountain Weather

There's no denying the fact that winter has arrived with 6-8 inches of new snow near Bozeman and Big Sky, 15 inches near West Yellowstone, and 22 inches near Cooke City. Temperatures this morning were in the mid teens F and winds calmed to 5-10 mph from the S and SE. Both winds and temperatures should remain the same through much of today though temperatures should start dropping this afternoon. Snowfall will continue with another 4-6 inches near Bozeman and Big Sky and 8-10 inches near Cooke City and West Yellowstone.

### Snowpack and Avalanche Discussion

Let's recap the recent weather. Just before this storm on Thursday, westerly winds blew up 60-80 mph ([video](#)), scouring some slopes and forming stiff wind slabs on others. Since Thursday night, 1.5 to 2 feet of low density snow fell in most areas while Cooke City received nearly 3 feet. During much of this storm, winds were blowing 15-30 mph from the W slowing backing to the SW until they calmed this morning.

Winds have easily transported this low density snow to the lee sides of ridges and gullies forming wind slabs which rest on low density snow. This is a classic recipe for avalanches which will be easily triggered today. Unfortunately popular areas like the Bridger Range and Hyalite Canyon will have many wind slabs which are stacked on top of stiff wind slabs from Thursday. Avalanches in these wind slabs could break several feet deep. With more snow expected, I wouldn't be surprised to see some natural avalanches as well. Consider the overhead hazard even if you are skiing on slopes not affected by the wind. Gullies in Hyalite Canyon and areas like the Apron at Bridger are exposed avalanches coming from steeper, wind loaded terrain above them. Another potential problem exists in the snowpack. Near the interface between October snow and November snow about 4-12 inches above the ground, some faceted crystals have been found. Eric and I found good bonding in this layer below treeline just north of Bridger Bowl and in Beehive Basin. Other skiers have confirmed bonding at this layer in these areas. However, the Big Sky Ski Patrol easily triggered two, large avalanches on the south face of Lone Mountain above treeline. Until we get more data, assess the strength of this layer especially on south aspects above treeline. Dangerous avalanche conditions exist in wind loaded areas where you can easily trigger an avalanche. Today, look for slopes not affected by the wind with good riding conditions and watch for overhead avalanche hazard. Doug will issue another Avalanche Information Bulletin tomorrow morning followed by one on Monday, and Wednesday. Daily advisories will start on Friday. 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 Basic Avalanche Awareness – Wed & Thurs, December 1 & 2, 7:00pm – 9:30pm at SUB Ballroom B&C; 12/4- Field day at Bridger Bowl ([more information](#)) ([PrePay \\$25 fee](#)) Avalanche Awareness for Snowmobilers – Wed & Thur, December 1 & 2, 7pm – 9:30pm at Team Bozeman, 2595 Simmental Way ([more information](#))