

GNFAC Avalanche Advisory for Mon Mar 14, 2011

Good morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, March 14, at 7:30 a.m. Bountiful Table, in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Warm and windy conditions are covering our forecast area. Currently, winds are blowing out of the WSW at 25-35 mph with gusts in Hyalite and Big Sky reaching over 50 mph. Mountain temperatures are currently in the high 20's F and will warm into the 30's F by this afternoon. Winds will continue to blow out of the WSW at 20-40 mph through the morning hours, but will gradually decrease by this evening. A weak weather disturbance will arrive by early afternoon depositing 2-3 inches of snow in the south and 1-2 inches in the north. A ridge of high pressure will build tonight into tomorrow making for a nice day on Tuesday.

Snowpack and Avalanche Discussion

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

The snowpack throughout our advisory area is generally "right side up", meaning high density snow is making up the foundation of our pack which is supporting lower density snow near the surface ([example](#)). This type of staircase structure often indicates stability, which is what we are currently seeing in most areas. Although a high percentage of the snowpack is comprised of this structure, a few problem areas do exist.

The primary avalanche concern today will be freshly formed wind slabs which have grown over the past 12-18 hours due to increasing winds. Although warm and calm conditions over the past few days have helped to limit snow available for transport, enough snow has been moved around to create a potential hazard. Upper elevations slopes with a north and east component will be the most prone to slab development. Although freshly formed wind slabs will likely break less than a foot deep, the possibility of triggering a deeper, older slab does exist. A skier near Cooke City observed recent avalanche activity which probably occurred due to the snow and wind event of March 10-11 ([photo](#)). One avalanche was estimated at close to four feet deep. Triggering a pocket of fresh wind deposited snow could potentially step down to older wind slabs, producing larger and more dangerous avalanches.

A second concern is a layer of facets 2 feet below the surface which has been found in the southern Madison Range ([video](#)). I found this layer in Bacon Rind on Saturday and again in Teepee Basin yesterday ([photo](#)). This layer propagated in stability tests, although it did take some force to initiate. I do not expect this layer to be a major problem unless it is on a slope with a heavy wind load. We have not found this layer outside of the southern Madison Range, but that does not mean it doesn't exist in other areas. Digging a snowpit and evaluating the strength and structure of the snowpack on the slope you plan to ride is always a healthy safety measure.

Today, continued strong winds will make human triggered avalanches possible on wind loaded slopes which have a [MODERATE](#) avalanche danger. Slopes that have not received a wind load have a [LOW](#) avalanche danger.

Doug 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 or call us at 587-6984.

“How To” Video Tutorials

We created three videos on the [Stability Tests](#) page describing how to perform a Compression Test, an Extended Column Test, and how to choose a snowpit location.