

GNFAC Avalanche Forecast for Sat Dec 4, 2010

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Saturday, December 4, at 7:30 a.m. Bridger Bowl, in cooperation with the Friends of the Avalanche Center, sponsors today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Yesterday morning an additional 2-3 inches of snow fell. The storm ended and clear skies came overnight with single digit temperatures this morning. Winds calmed to 5-10 mph from the WSW with a few gusts near 20 mph. As another storm passes south of the advisory area, the mountains near West Yellowstone will have mostly cloudy skies while the mountains near Bozeman will have mostly sunny skies. Temperatures will warm into the low 20s F and winds will remain calm.

Snowpack and Avalanche Discussion

The mountains around Cooke City and the Washburn Range:

Yesterday's storm deposited almost 2 inches of [snow water equivalent](#) (20 inches of snow) in the mountains north of Cooke City. Prior to this storm, skiers and snowmobilers reported a strong snowpack, but this storm likely pushed the snowpack to its breaking point. Although winds have decreased, they blew hard during the storm, and many heavily wind loaded slopes exist. These slopes can easily produce avalanches. They can fracture within the storm snow or they might break on deeper layers in the snowpack. Until we get more data from this area, I'm being conservative and today the avalanche danger is rated [CONSIDERABLE](#).

The Bridger, Gallatin and Madison Ranges and the Lionhead area near West Yellowstone:

Yesterday, Eric skied in the northern Bridger Range hunting for instabilities. On a NE aspect at 8000ft, he found a layer of weak faceted crystals 11 inches above the ground under the October ice crust ([photo](#)). This layer produced clean shears and propagated fractures in multiple stability tests ([video](#)). On Wednesday near Hyalite Peak, a group of skiers spotted several natural avalanches involving fresh wind slabs on northerly aspects, and two of them stepped down to deeper layers in the snowpack. I suspect these layers were similar to the one Eric found. Despite these findings, we have received many reports of stable snow. Yesterday near Big Sky on a NE aspect near treeline, I investigated the snowpack with the Yellowstone Club Ski Patrol. We found stable snow and no notable weak layers similar to what I found south of Bridger Bowl on Tuesday.

The snowpack is strong in many areas but not all. For now, dig to the ground and look for weak faceted snow. Despite the spotty existence of this faceted layer, the primary avalanche concern continues to be wind blown snow near ridgetops. These wind slabs and pillows will easily fracture and produce avalanches but probably not over large areas. For this reason on wind loaded slopes the avalanche danger is rated [CONSIDERABLE](#). Non wind loaded terrain has a [MODERATE](#) avalanche danger.

Eric 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.

Upcoming Avalanche Education

1hr Avalanche Awareness - Tue, December 7, 6:30pm – 7:30pm @ REI Bozeman

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. Sat, December 11, 7:30pm – 8:30pm at World Boards.