GNFAC Avalanche Forecast for Thu Mar 17, 2016

Good morning. This is Alex Marienthal with the Gallatin National Forest Avalanche Advisory issued on Thursday, March 17, at 7:00 AM. Today's advisory is sponsored by **Mystery Ranch** and **Bozeman Ski Guide**. This advisory does not apply to operating ski areas.

Mountain Weather

The northern Gallatin Range got 4" of snow last night while the rest of the mountains received 1-2" of snow. Winds have been out the west-northwest at 5-15 mph with gusts in the 20s. Temperatures this morning are in the single digits to low teens F and will be in the teens to low-20s F today. Wind will be 5-15 mph out of the northwest and shift to the northeast tonight. A moist northwest flow today will deliver 4-7" of snow to the mountains around Bozeman and Cooke City, and the mountains near Big Sky and West Yellowstone will get 2-4".

Snowpack and Avalanche Discussion

Southern Madison Range Southern Gallatin Range

Lionhead area near West Yellowstone Cooke City

The mountains in the southern half of our advisory area have been favored with snow. Over the last ten days, snowfall near West Yellowstone and south of Big Sky has totaled over 3" of snow water equivalence (**SWE**), and snowfall near Cooke City totaled around 2" of SWE. Strong winds over the past week have transported this new snow to form wind slabs and stress buried persistent weak layers.

Weak layers of surface hoar and facets are buried 2-4 feet deep and could produce avalanches under the weight of a skier or rider. Avalanches were triggered on these buried weak layers over the past week in the Lionhead area (**photo**), and the nearby Centennial Range (**photo**, **photo**). Yesterday my partner and I found a layer of surface hoar buried about 2 feet deep at Lionhead (**video**). The distribution of these weak layers is patchy, and there might not be obvious signs of instability such as collapsing, cracking, or avalanches. Dig to look for these layers, and expect avalanches will most likely be triggered on wind loaded slopes.

Today it will be possible to trigger a wind slab or an avalanche on a buried persistent weak layer. Therefore, the avalanche danger is rated **MODERATE** on all slopes.

Bridger Range Northern Madison Range Northern Gallatin Range

The mountains around Bozeman and Big Sky have received around 2" of snow water equivalence (**SWE**) in the past ten days, and they lack buried persistent weak layers. My partners and I toured near Beehive Basin on Tuesday where we found the new snow was bonded well with the old snow surface and there was a stable snowpack below that (**video**). The only instability was wind slabs that were formed near ridgelines due to strong westerly winds. Wind speeds have decreased since Tuesday, and wind-loading has lessened. However, it will remain possible to trigger an avalanche on wind-loaded slopes, which will be found near ridgelines. Consequently, the avalanche danger is rated **MODERATE** on wind-loaded slopes and **LOW** on other slopes.

I will issue the next advisory tomorrow morning by 7:30 a.m. If you have any snowpack or avalanche observations to share, drop us a line at mtavalanche@gmail.com or leave a message at 587-6984.

EVENTS and AVALANCHE EDUCATION

A complete calendar of classes can be found ***HERE****.*