GNFAC Avalanche Advisory for Sat Feb 20, 2016

Good morning. This is Alex Marienthal with the Gallatin National Forest Avalanche Advisory issued on Saturday, February 20, at 7:15 AM. Today's advisory is sponsored by **Montana Ale Works** and **Buck Products** . This advisory does not apply to operating ski areas.

Mountain Weather

Since yesterday morning the mountains near Cooke City received 2-4" of snow while the rest of the area remained dry. Temperatures this morning are in the teens to low 20s F. Wind overnight was out of the west-southwest at 20-30 mph with gusts up to 50 mph. Temperatures today will remain in the teens to low 20s F under mostly cloudy skies. Wind will shift to the northwest at 20-30 mph and there is a chance for 1-3" of snow this afternoon and evening.

Snowpack and Avalanche Discussion

Southern Madison Range Southern Gallatin Range

Lionhead area near West Yellowstone Cooke City

A weak layer of surface hoar buried 1.5 to 2 feet deep exists from West Yellowstone to Cooke City and produced avalanches this week. An observer found this layer in the southern Madison Range (**photo**) and Doug found it near West Yellowstone (**video**) last Sunday. Since Monday, several avalanches were triggered on this layer near Cooke City (**photo**, **photo**).

Over the last 48 hours the mountains near west Yellowstone received almost 1" of snow water equivalence (**SWE**) and the mountains near Cooke City received 1.2" of SWE. This weight, and strong winds that formed deep drifts, were enough to stress buried weak layers and cause avalanches. Yesterday, observers near Cooke City found unstable test results on surface hoar, and then witnessed a large avalanche that broke down to depth hoar near the ground. They either triggered this slide from a distance on flat terrain, or it was triggered by a natural cornice fall (**photo**). Either way, this is bullseye data that the snowpack is unstable and triggering an avalanche is likely.

Recent snow and wind that rapidly loaded a weak snowpack was a good stability test, which the depth hoar did not pass. It is still possible to trigger avalanches on weak facets 2-3 feet deep or sugary depth hoar near the ground, as shown by the slide yesterday near Cooke City and the avalanche triggered by a snowmobiler last Sunday in the Taylor Fork (**video**, **photo**).

Today, human triggered avalanches are likely and the avalanche danger is **CONSIDERABLE**. Large avalanches are possible and could be triggered from lower angle terrain below steep slopes. Avoid avalanche terrain or practice cautious route finding and conservative decision making.

Bridger Range Northern Madison Range Northern Gallatin Range

The mountains near Bozeman and Big Sky received less than .5" of SWE in the past 48 hours, and strong winds formed dense slabs of snow near ridgelines. Warm temperatures promoted bonding of these wind slabs and they will be stubborn, but possible to trigger today. On Thursday, Eric and I toured near Fairy Lake in the Bridger Range and found the recent snow and wind slabs were well bonded to the old snow surface, and there was a

strong snowpack below (**video**).

Minimal snowfall over the past two weeks has allowed depth hoar near the ground to adjust to overlying stress. It is difficult to trigger an avalanche on deeper buried weak layers, but it is still a possibility in isolated areas. Eric discusses this setup in his video from Beehive last weekend (**video**).

Wind slabs will be possible to trigger today, so the avalanche danger is **MODERATE** on wind loaded slopes and **LOW** on all other slopes.

Eric 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**.*

West Yellowstone: TONIGHT!!, February 20, 7-8 p.m., ***1-hr Avalanche Awareness for Snowmobilers*** at the Holiday Inn.

Bozeman: Wednesday, February 24, 6-7 p.m. ***1-hr Avalanche Awareness***, Roskie Hall, MSU.