

GNFAC Avalanche Advisory for Fri Mar 30, 2012

Good Morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, March 30 at 7:30 a.m. A Montana Fish, Wildlife & Parks Recreation Trails Grant sponsors today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Since yesterday the mountains near West Yellowstone and Cooke City received 4 inches of snow, the Taylor Fork area received 2 inches, Hyalite received 1 inch, and all other areas were mostly dry. Yesterday all areas remained below freezing except the Bridger Range which didn't get too warm with a high temperature of 38 degrees F. This morning temperatures in the Bridger Range were hovering near freezing while other areas had temperatures in the high 20s F. Winds were blowing 10-20 mph from the W and SW with gusts of 40 mph.

Today will be mostly cloudy and temperatures will rise into the upper 30s F (40s F for the Bridger Range). The mountains near Cooke City and West Yellowstone will get 6 inches of snow. Mountains near Big Sky will get 2-3 inches and maybe only an inch near Bozeman. Spring storms can be surprising, and I have little confidence in these snowfall amounts. A lot more or a lot less could easily accumulate.

Snowpack and Avalanche Discussion

Bridger Range Gallatin Range

The Bridger Range has consistently been warmer and had more above freezing temperatures than other areas; consequently, depth hoar near the ground is moist and very weak. In snowpack jargon, moist means it has a water content less than 3% (by volume), and it makes a snowball when lightly crushed. Last Friday a cycle of big wet slab avalanches began and culminated with five triggered ones at Bridger Bowl on Tuesday. These avalanches were big and destructive ([Bridger Gully](#), [Sluice Box](#), and [many photos](#)).

With a good freeze two nights ago, cool temperatures yesterday, and barely freezing temperatures last night, the flow of liquid water through the snowpack has slowed or ended. Avalanches remain possible with weak, moist depth hoar near the ground. For today the avalanche danger is **MODERATE** but it could quickly rise if rain, warm temperatures, or strong sunshine restart the flow of liquid water. One of two weather options could improve stability. Prolonged very warm weather could push the snowpack through this wet slab, avalanche cycle by establishing drainage channels in the snowpack. Or, prolonged cold temperatures could freeze the snowpack and lock it up like concrete. Neither option seems likely in the near term forecast.

Gallatin Madison Ranges Lionhead area near West Yellowstone

Yesterday, most places in the Gallatin and Madison Ranges and the Lionhead area remained below freezing. These cold temperatures have reduced the potential for wet snow avalanches by refreezing the snow surface and ending the percolation of liquid water through the snowpack. A few areas that received new snow and wind, like the Taylor Fork and Hyalite areas, may have very shallow wind slabs resting on an ice crust near ridgelines. For today the avalanche danger is **MODERATE**. Any sudden change in weather that begins melting the frozen surface layer of snow will increase the avalanche danger.

The mountains around Cooke City

The mountains around Cooke City have over 8 feet of hard, dense and stable snow above 9000 ft. Doug was riding in this area yesterday and filmed a quick video clip showing these conditions ([video](#)). Conditions can change rapidly, but the good news is that you only need to focus your stability evaluations on the top foot or two of the snowpack. If you were hoping to ride or ski in avalanche terrain this is the place to do it. With 4 inches of new snow, more coming, and some strong winds, watch for fresh wind slabs. Today the avalanche danger is [LOW](#).

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.

Avalanches: Decision-making and Psychology

On March 28 the GNFAC and Friends hosted a Professional Development Workshop on "Decision-making and Psychology". All six lectures are uploaded to YouTube. Making high consequence decisions in dynamic, dangerous environments is tricky stuff. These lectures are by an avalanche worker, forecaster, SEAL, airline pilot, and psychologist. Watch, listen and learn. You can view the lectures here:
http://www.youtube.com/playlist?list=PLEFAE2148A0027DF6&feature=view_all

Events

loose dry avalanche

Big Sky