

GNFAC Avalanche Advisory for Fri Apr 1, 2011

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Friday, April 1, at 7:30 a.m. The Big Sky Ski Patrol, 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 weather continues with temperatures near 30 F at 9000 ft. Since yesterday the mountains near Cooke City received 5 inches of snow. The rest of the advisory area remained dry. Winds blew 30-50 mph overnight from the W and SW, and this morning they were blowing 20-35 mph. An upper level ridge will prevent any accumulating precipitation today. Temperatures will climb into the high 30s and low 40s F, and winds will blow 15-25 mph from the W and SW. A low pressure system will arrive tomorrow afternoon with snow followed by colder temperatures on Sunday.

Snowpack and Avalanche Discussion

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

Doug, Eric, and I investigated several avalanches in the northern Bridger Range yesterday near Sacajawea Peak. There were two issues, both relevant for the rest of the advisory area.

1. Small, subtle facets formed Sunday afternoon: Doug found this layer just north of Bridger Bowl on Monday and we found it in an avalanche on the Throne yesterday. This avalanche was 1-1.5 feet deep and occurred on all aspects except S. This weak layer became a problem because it was immediately capped by new snow Sunday night and quickly loaded again Wednesday morning. Fortunately this layer is bonding quickly and will cease to be a concern. ([video](#), [photo](#), [snowpit](#))
2. Old facets near the ground: One avalanche on Naya Nuki Peak was nearly as big as last year's avalanche on Saddle Peak. Several other large avalanches occurred on Sacajawea. I thought we had a pretty stable snowpack this year? We do, but everything has its breaking point. Strong winds and over 3 inches of [snow water equivalent](#) this week provided more stress than the snowpack could hold. A weaker snowpack would have produced more frequent, smaller avalanches. ([video](#), [photo1](#), [photo2](#), [photo3](#))

What to do? Predicting deep slab avalanches is very difficult. When the snowpack receives a heavy load from a series of big spring storms and strong winds, give it time to adjust before riding big lines. Also, constantly assess bonding between the new snow and old snow. A group near Hardscrabble on Wednesday discovered a weakness in stability tests and chose a small, safe slope. When they triggered a small avalanche it did not catch or harm anyone and confirmed their findings. Other avalanches about 2 ft deep were observed in wind loaded areas on Saddle Peak.

The main issue remains wind loaded terrain where recently formed slabs will be the most sensitive, and today wind loaded slopes have a [CONSIDERABLE](#) avalanche danger. Warm temperatures are helping new snow bond to older snow layers, but human triggered avalanches are possible giving these slopes a [MODERATE](#) avalanche danger.

Something to consider:

Saddle Peak produced a massive avalanche (much larger than last year's) on March 17, 1981 following a series of storms that month dropping nearly 2 inches of water. Although the snowpack may be stronger this year, it has received a load of almost 9 inches of water in the Bridger Range in the month of March. SNOTEL sites in the rest advisory area have received similar amounts this month.

I 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.

Ride in honor of Steve Green

Tomorrow: Saturday, April 2nd, is a memorial ride on Buck Creek Ridge in honor of Steve Green who died in an avalanche last April in McAtee Basin. Meet at 9:30 a.m. at the Buck Creek parking lot near the Corral. Click [HERE](#) for more information.

Last Advisory

The last avalanche advisory of the winter is Sunday, April 10th. That will be our 145th advisory of the season—more than any other in our 21 year history.