

GNFAC Avalanche Advisory for Sat Feb 28, 2009

Good morning. This is Mark Staples with the Gallatin National Forest Avalanche Advisory issued on Saturday, February 28th, at 7:30 a.m. The Pinhead Classic Telemark Festival in cooperation with the Friends of the Avalanche Center sponsor today's advisory. This advisory does not apply to operating ski areas.

Mountain Weather

Yesterday morning the Bridger Range and northern Gallatin Range received a few more inches of snow at the end of the storm, but snowfall ended quickly and no new snow accumulated overnight. Winds this morning were blowing 8-25 mph from the west and southwest with mountain temperatures near 10 degrees F around Bozeman and Big Sky and single digits near West Yellowstone and Cooke City. Valley temperatures are colder in most areas especially West Yellowstone where they are about 20 degrees below 0 F. Today will be similar to yesterday under a ridge of high pressure with mostly sunny skies. Air temperatures will only reach the 20s F but will feel much warmer and should be significantly warmer tomorrow as warm air approaches from the south. Winds will blow 15-20 mph at ridgetops from the west southwest.

Snowpack and Avalanche Discussion

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

Conditions are prime for human triggered avalanches. A six week period of prolonged dry weather significantly weakened the snowpack in many areas and created a variety of new weak layers. On Tuesday snow finally returned to southwest Montana adding up to about a foot near Bozeman and Big Sky, 1-2 ft near West Yellowstone, and 3 ft near Cooke City. A significant portion of this snowfall occurred less than 48 hours ago. Considering our feeble snowpack, this snowfall has been a rapid [loading](#) event pushing weak layers to their breaking point. The combination of recent snow, buried weak layers, powder fever, and today's beautiful weather makes me nervous.

Last weekend I dug a snow pit on a south facing slope near Big Sky and was surprised by the weak shallow snowpack. I thought this snow was an anomaly but it was not. A similar snowpack has been found in many other areas including Mt Ellis, the Hyalites, the west side of the Bridgers, and west facing slopes in Beehive Basin. On Tuesday as snowfall started, I was able to [trigger](#) a small avalanche on the west side of the Bridger Range indicating a strong probability of bigger avalanches today on similar slopes. Yesterday north of West Yellowstone I found similar conditions you can see in a brief video clip

<http://www.youtube.com/watch?v=SmRpvtvchk>

Other areas have deeper snow but still contain multiple weak layers that may include small faceted crystals or [surface hoar](#). My partner and I felt the new snow only needed a breath of wind for it to become a slab capable of producing an avalanche, and ski patrollers at Big Sky, Moonlight Basin, and the Yellowstone Club easily triggered many soft slab avalanches yesterday. At Bridger Bowl where there had been less wind patrollers triggered more sluffs than slab avalanches; however, they noted obvious plumes of wind transported snow on Saddle Peak where I would expect human triggered avalanches today. What's tricky is the new snow may seem

fluffy and not feel like a slab when it is. Today a skier or rider will probably [trigger](#) an avalanche on wind loaded slopes near ridgetops where the avalanche danger is [CONSIDERABLE](#). On all other slopes human triggered avalanches are definitely possible and a [MODERATE](#) avalanche danger exists.

SOME WORDS OF CAUTION

Beware of the human factor today. There are many reasons why it can be difficult to make an objective assessment of [stability](#). Obvious signs of instability like collapsing or cracking and recent avalanches may be hard to find. Obvious signs of good skiing or riding will be everywhere and may tempt us into making poor decisions.

AVALANCHE EDUCATION

1. March 6-9 the Montana Outdoor Science School will offer a Level I avalanche class. Contact MOSS at 406-582-0526 or admin@outdoorscience.org for more information.

Using all I've learned from masters of the force like Karl Birkeland, I hope to avoid turning to the Dark Side and will issue the next advisory tomorrow morning at 7:30 a.m. If you get out in the backcountry give us a call or send us an email with your observations. You can reach us at 587-6984 or at mtavalanche@gmail.com.