

GNFAC Avalanche Advisory for Mon Mar 3, 2014

Good Morning. This is Eric Knoff with the Gallatin National Forest Avalanche Advisory issued on Monday, March 3 at 7:30 a.m. [Bountiful Table](#) and [Ticket River](#), sponsor today's advisory. This advisory is dedicated to Ben Richards who was killed in an avalanche on this day in 2007.

Mountain Weather

Yesterday, the sun poked out for a few hours but was quickly obscured as another round of moisture pushed in from the west. Overnight, the mountains around Cooke City and West Yellowstone including the southern Madison Range picked up 5-8 inches of new snow. The Bridger Range picked up 4-6 inches while the mountains around Big Sky picked up 1-2 inches.

Currently, temperatures are balmy with the mercury pushing into the mid to upper twenties in most locations. Winds are blowing 10-20 mph out of the WSW with ridge top gusts pushing 40 mph in Hyalite and Big Sky. Today, a moist westerly flow will keep skies mostly cloudy and the southern mountains will pick up an additional 1-3 inches. Today, temperatures will warm into the low thirties F and winds will continue to blow 15-25 out of the WSW. An unsettled weather pattern will continue over the next few days with more snow likely in the mountains around Cooke City and West Yellowstone.

Snowpack and Avalanche Discussion

Cooke City

The mountains around Cooke City have a lot of snow. At Fisher Creek Snotel site (elev. 9,100 ft.) there is ten feet of snow on the ground. Higher elevations have even more snow. A general rule of thumb is that a deep snowpack is a strong snowpack. However, relentless snowfall and strong winds continue to produce multiple avalanche problems ([video](#)).

Today, the primary concern is new snow instability. Fresh snow and strong winds will make human triggered avalanches likely on wind loaded slopes. While wind slabs are the main concern, non-wind loaded also hold the potential to produce slides. On Saturday, my partner and I found an avalanche that broke 18 inches deep on an ice crust, but only involved newly deposited snow ([photo](#)). This slope was not wind-loaded and the avalanche appeared to have been triggered from below. Skiers triggered similar slides on south facing slopes on Friday.

A less likely scenario is triggering a slide that fails on facets near the ground. On Friday, my partner and I checked out the large slide triggered off Woody Ridge six days ago ([photo](#)). The trigger point for this slide was a thin rocky area where the snowpack was only a foot deep. Watch for and avoid these thin areas. Slides like this are rare but will remain a possibility as long as it keeps snowing and blowing.

Today, new snow and wind make human triggered avalanches likely and the avalanche danger is rated [**CONSIDERABLE**](#).

Gallatin Range Madison Range

Lionhead area near West Yellowstone

On Saturday, a group of skiers triggered a large slide above Hebgen Lake. The slide broke 150' wide, 2-3' deep and occurred on a NE facing slope ([crown, runout](#)). This slide was surprising since Doug was in the same area a week ago and found good stability on similar slopes. This avalanche falls on the heels of two separate human triggered slides that took place in the Big Sky backcountry earlier in the week ([Chippewa, Little Bridger](#)). All three slides occurred on wind loaded slopes and broke on facets formed more than a month ago.

Now is a tricky time as the snowpack delivers us mixed messages. On many slopes the snowpack is gaining strength, which has been backed up by observations and [stability tests](#) from around the area. While it appears that the snowpack is trending towards stability, human triggered avalanches continue to take place. This is bull's eye data the light is not green in the backcountry ([video](#)).

As more snow and wind impact the area, the snowpack will remain under stress. For this reason human triggered avalanches are likely on wind loaded slopes and slopes steeper than 35 degrees which have a [CONSIDERABLE](#) avalanche danger. All other slopes have a [MODERATE](#) avalanche danger.

The Bridger Range

The Bridger Range has a strong snowpack, but a human triggered slide near Frazier Lake yesterday is a good reminder this area is not immune to avalanche activity. The slide broke a foot deep and occurred on a north facing slope. It ran full track and easily could have buried or injured a skier or rider.

As snow continues to pile up this morning, the avalanche danger will remain elevated. Avalanches occurring within the new snow are the primary concern. New snow avalanches won't be exceptionally large, but will produce enough volume to carry or even bury a skier or rider. This problem will be most hazardous in high consequence terrain such as the northern Bridgers and Saddle Peak.

There is the possibility of a skier or rider triggering an older wind slab that formed during the east wind event a few days ago. These older slabs will be difficult to identify since they are now covered by 4-6 inches of new snow.

Today, human triggered avalanches are likely on slopes steeper than 35 degrees which have a [CONSIDERABLE](#) avalanche danger. Less steep slopes have a [MODERATE](#) avalanche danger.

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.

BACKCOUNTRY SKIERS AND RIDERS NEEDED FOR MSU SURVEY

This project aims to collect GPS location information and survey responses from backcountry skiers and riders to better understand what types of terrain decision we make. The focus is on backcountry skiers and riders of all abilities and experience. You need not be an expert backcountry skier to participate in this research. For more information and to sign up: www.montana.edu/snowscience/tracks